BEYOND BINARIES:

TOWARDS A GENDER INCLUSIVE SANITATION FUTURE

Submitted in accordance with the requirements for
the degree of Doctor of Philosophy

The University of Leeds,
Faculty of Engineering and Physical Sciences,
School of Civil Engineering

Supervised by:
Prof. Barbara E. Evans | School of Civil Engineering | University of Leeds, UK
Dr Paul Hutchings | School of Civil Engineering | University of Leeds, UK
Dr Lata Narayanaswamy | School of Politics and International Studies | University of Leeds, UK
Dr Dani J. Barrington | School of Population and Global Health | University of Western Australia

Guided by:
Ravikirankumar Bokam | Pranav Singh | Snehalatha Mekala

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INTELLECTUAL PROPERTY AND PUBLICATION STATEMENTS

The candidate confirms all work submitted for this thesis is their own, with the exception of work which forms part of a jointly authored publication; contribution of the candidate along with other authors has been explicitly indicated below. The candidate confirms appropriate credit has been given within the thesis, explicitly referencing work of others.

Chapter III of this thesis contains a jointly authored publication:

Chapter III: Robinson, H. J., Barrington, D. J., Evans, B., Hutchings, P., Narayanaswamy, L. 2023. Gender inclusion in Water, Sanitation and Hygiene (WASH): Intention versus Reality. *Development Policy Review.* 42(2). e12741. https://doi.org/10.1111/dpr.12741

All authors conceived and developed the article.

H.J.R produced the original draft and all diagrams.

All authors edited and approved the manuscript.

The candidate is the lead author of the above article. She designed the research, methodologies, and conducted data collection and analysis. Authors are listed alphabetically in the Article following the lead author. The article was co-authored with supervisors; their contributions to the article are listed individually.

THESIS STRUCTURE

This thesis contains eight chapters, and is submitted in traditional monograph style, with one journal article in place of a traditional chapter. The overarching themes of this thesis are Water, Sanitation and Gender, and the research explores challenges that prevent the existence of transformational gender equality within this space. This thesis is interdisciplinary in nature, combining technical elements of engineering with social factors such as governance and legal frameworks, human behaviour, cultural norms and social dynamics.

Chapter I develops the methodologies used in this PhD to collect and analyse data in order to create original contributions to knowledge. Rationale for mixed methods is specified, with reference to the need for triangulation. The PhD aims and objectives are set out in this chapter, which sets the research rationale for the thesis. Researcher positionality and reflections on the fieldwork and thesis development process are also included here.

Chapter II introduces the key knowledge within gender, development and sanitation needed to ground this thesis. It highlights gaps in understanding and identifies key debates and challenges that have historically prevented progress within this area.

Chapter III centres on a published journal article that addresses the lack of systematic cross-agency assessment of gender incorporation in WASH investments supported by international development agencies. This research provides a valuable and novel evaluation of the performance of development agencies in this domain, using a gender sensitivity framework to highlight the extent to which gender is included and incorporated in project implementation.

Chapter IV builds on the context introduced in Chapter I, and the challenges for gender inclusion identified in Chapter III, and provides the rationale for an assessment of gender inclusion in the WASH programming of a single country. The Swachh Bharat Mission (SBM) is introduced as a National Government Program working towards the elimination of open defecation in India; Its gender components are investigated to display the innovative intention of gender at a policy level.

Chapter V investigates the usability of gender guidance across the SBM. Data collection spanned the period April-July 2022, across four states in India, and used semi-structured interviews and focus groups to document the perceived barriers for gender inclusion throughout SBM's implementation from 2014-2019.

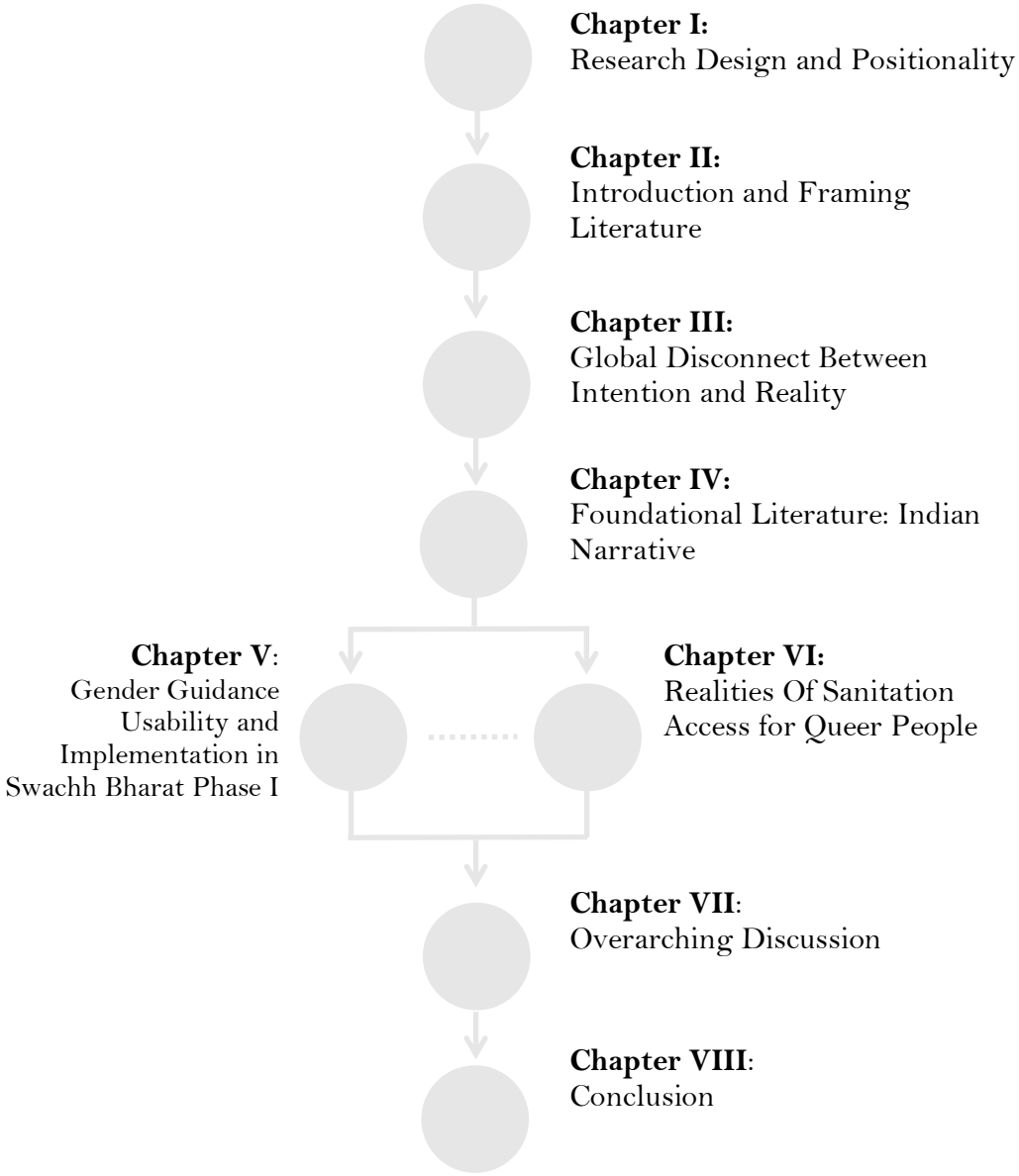
Chapter VI builds on the challenges posed in chapter v, documenting how queerness shapes access to sanitation, after being excluded and sidelined in the roll-out of SBM. Empirical data collection through semi-structured interviews and focus groups between February and October of 2023 identified previously undocumented challenges for access and inclusion of

queer people in sanitation. This final data driven chapter uses both government interviews to investigate current gender diverse programmes and focus groups with gender diverse communities to understand the access and inclusion challenges in sanitation.

Chapter VII draws together the commonality of the studies, exploring the three key themes for this work: Prioritising Accountability Mechanisms, Understanding Gender and Sexuality, and Connecting Engineering and Society. Using illustrative examples, the themes are explored and drawn together to emphasise the connected nature of Global, National and Local challenges for Gender Equality.

Chapter VIII defines the impact contribution, and contribution to scholarship, setting out how the overall aim and associated objectives have been met by the thesis. Following this, limitations in terms of practical research design and the covid-19 pandemic are explored, integrating how researcher positionality affected the decisions made throughout the course of the work. The thesis concludes by connecting the outcomes of this work to potential future research endeavours, and issuing a call to action for the development sector, emphasizing the necessity for transformational and intersectional gender inclusion.

VISUAL REPRESENTATION OF THE THESIS STRUCTURE



This representation depicts the research flow of this thesis. The first three chapters explore the overall methodology, framing concepts and the initial investigation. Chapter IV frames literature not required for understanding Chapter III, but does directly feed into chapters V and VI. These next two chapters are shown in tandem as they are connected chapters; two qualitative chapters exploring Indian implementation and design of sanitation access. All of which come together for chapters VII and VIII to conclude the thesis.

STATEMENT OF PROJECT CONTRIBUTIONS

The research in this thesis was completed by a Team which includes the Lead Researcher (Hannah J. Robinson), Supervisors (Dani J. Barrington, Barbara E. Evans, Paul Hutchings and Lata Narayanaswamy), Research Guidance Providers (Ravikirankumar Bokam, Snehalatha Mekala and Pranav Singh), Departmental Admin Support (Sadie Holroyd, James McKay, and Emily Bryan-Kinns), two anonymous organisations[1] and 135 research participants across surveys, interviews and focus group discussions.

The majority of data collection, analysis, conceptual development, and writing have been completed by the lead author, however this research has been completed by a team, of which their contributions are as follows:

Thesis and Journal Article Development and Ethics

- Hannah J. Robinson
- Dani J. Barrington, Barbara E. Evans, Paul Hutchings, and Lata Narayanaswamy

Data collection, research guidance and in-country support

- Hannah J. Robinson
- Barbara E. Evans
- Independent Researchers[2]: Ravikirankumar Bokam, Snehalatha Mekala, Pranav Singh
- *Two anonymous organisations*
- 130 research participants and knowledge providers

Funding and Administration

- Sadie Holroyd, Emily Bryan-Kinns and James McKay

[1] Two anonymous organisations were core parts of this research. They aided with finding and suggesting interviewees and potential focus group areas, planning site visits, helping with in-country administration, and providing general support during the research trips. However, as the research critiques the government of India in part, the organisations have asked to remain anonymous at this time. Their names have been removed from documentation and this is why certain appendices have **** in place of an organisation's name. Further context is given in Chapter I, nevertheless the research team still want to acknowledge this contribution, even if it remains anonymous.

[2] Data collected by Independent Researchers does not reflect the views of the organisations they currently work for, this work was carried out independently and results do not necessarily reflect their associated organisations.

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III. School of Planning and Architecture, Delhi, India
IV. Loughborough University and Cranfield University *(allied Institutions for the PhD Program)*

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And finally, to my family, my Mam, Dad, Lottie, Poppy, Brownyn, Ruby, Amber and Teddy - you have supported me in so many different ways to get me to where I am today, and I couldn't have done it without you. Thank you for being my biggest cheerleader, and helping me become the woman I am today.

ABSTRACT

PURPOSE AND SCOPE: Gender Equality is a human right, and typically considered a good principle when designing development programs. Water, sanitation and Hygiene (WASH) programs often publicly state the importance of gender equality measures through the use of guidelines and policy, but the effectiveness of this documentation is under-researched. This thesis demonstrates the challenges of implementing gender guidance in WASH programs, exploring perceived challenges at a global, national, and community level. Beginning at a global level, the thesis explores commonality in development program evaluations, assessing the level of gender inclusion, querying the need for a sector shift in the way 'gender' is written about and investigated. It then reflects on proposed challenges, and contextualises findings, investigating gender guidance incorporation in India's Swachh Bharat Mission. Inclusion of gender guidance is documented along the chain of implementation, with perceived challenges highlighted by key informants. Finally, the thesis examines the reality for marginalised genders that are recognised by the national constitution in India, but are not recognised in gender guidance.

METHODS: This thesis uses a mixed methods approach to investigate the research questions. Open-ended discursive surveys have been used in conjunction with a grey literature review of WASH development program evaluations to assess the level of gender inclusion at an implementation level. Key informant interviews were completed to gauge perceptions of government staff, academics, non-governmental organisation workers and activists in accordance with the intention and curation of gender guidance, and the potential differing implementation results. Community focus groups were also held to assess how marginalised genders not represented in gender guidance are able to access and use sanitation facilities.

FINDINGS: A global analysis of international development program evaluations identified discord between industry leading organisations' public attitudes towards gender equality, and the reality of gender inclusion. Evaluation practices were categorised between insensitive and transformative, with over 50% of the practices categorised at the lowest level of gender sensitivity due to vague language, reprioritised budgets and a lack of active involvement of multiple genders at all levels of programming. Building on the reflections, further investigation of the discord between intention and reality was carried out by examining implementation of the Swachh Bharat Mission. At a national level in India there is recognition of the need for gender guidance, and intention to create programs with an emphasis on gender

equality. However, ambiguous accountability at ministerial level creates uncertainty in ownership of gender guidance. This leads to inaccessible funding, minimal organisational and personal accountability, and poor dissemination of guidance. At a community level there is need to end the homogenisation of identities; evidence showed LGBTQ+ people are often misrepresented as 'Transgender' due to limited understanding of gender and sexuality. Homogenisation fails to account for intersectional identities, and assumes people fit neatly into discrete categorisation, which is far from reality; even within small sample sizes, there was huge variance in answers around 'ideal' sanitation systems and access. The conscious exclusion of complex queer identities in sanitation planning, especially transgender persons, creates inaccessible and inappropriate facilities. Only by including diverse perspectives and prioritising inclusive design can accessible and appropriate facilities be created.

IMPLICATIONS: Striving for the use of gender guidance will always encounter challenges in implementation due to prioritisation of other program attributes, poor accountability mechanisms, and minimal associated funding. Being able to separate gender from what is required as a 'basic' need enables separation of identity characteristics; if there is limited funding the optional and additional gender guide will be discarded. Moving towards programs with universal design principles that prioritise the needs of people, not of specific homogenised genders, will ensure more sustainable and inclusive outcomes.

Contents

TABLES AND FIGURES

ABBREVIATIONS

ADB	**A**sian **D**evelopment **B**ank
AfDB	**A**frican **D**evelopmen**t** **B**ank
CRSP	**C**entral Rural **S**anitation **P**rogramme
CSC	**C**ommunity **S**anitation **C**omplex
EPSRC	**E**ngineering and **P**hysical **S**ciences **R**esearch **C**ouncil
GESI	**G**ender **E**quality and **S**ocial **I**nclusion
GLAAS	**Gl**obal **A**nalysis and **A**ssessment of **S**anitation and Drinking-Water
GSM	**G**ender and **S**exual **M**inorities
HCD	**H**uman **C**entred **D**esign
IDWSSD	**I**nternational **D**rinking **W**ater **S**upply and **S**anitation **D**ecade
IEC	**I**nformation **E**ducation and **C**ommunication
IHHL	**I**ndividual **H**ouse **H**old **L**atrine
JJM	**Jal J**eevan **M**ission
JMP	**J**oint **M**onitoring **P**rogramme *(ran by The WHO/UNICEF)*
LGBTQIA+	**L**esbian, **G**ay, **B**isexual **Transgender**, **Queer** and/or **q**uestioning, **I**ntersex and **A**sexual
LNOB	**L**eave **N**o **O**ne **B**ehind
MAM	**M**utual **A**ccountability **M**echanism
MHM	**M**enstrual **H**ygiene **M**anagement
NBA	**N**irmal **B**harat **A**bhiyan
NCTE	**N**ational **C**entre for **T**ransgender **E**quality *(USA)*
NCTP	**N**ational **C**entre for **T**ransgender **P**ersons *(India)*
NHRC	**N**ational **H**uman **R**ights **C**ommission *(India)*
ODF	**O**pen **D**efecation **F**ree
PPAR	**P**roject **P**erformance **A**ssessment **R**eports
SanQol	**SAN**itation-related **Q**uality **O**f **L**ife

SBM	**S**wachh **B**harat **M**ission
SBM-G	**S**wachh **B**harat **M**ission **G**rameen [rural]
SBM-U	**S**wachh **B**harat **M**ission **U**rban
SDGIE	**S**exual **D**iversity, **G**ender **I**dentity And **E**xpression
SNV	**S**tichting **N**ederlandse **V**rijwilligers *(Dutch development agency)*
SOGISEC	**S**exual **O**rientation**, G**ender **I**dentity and **E**xpression and **SE**x **C**haracteristics
TSC	**T**otal **S**anitation **C**ampaign
UKRI	**U**nited **K**ingdom **R**esearch and **I**nnovation
UNICEF	**U**nited **N**ations **I**nternational **C**hildren's **E**mergency **F**und
VWSC	**V**illage **W**ater and **S**anitation **C**ommittee *(India)*
WASH	**WA**ter, **S**anitation and **H**ygiene
WASH-GEM	**WA**ter, **S**anitation and **H**ygiene **G**ender **E**quality **M**easure
WHO	**W**orld Health **O**rganisation
WSP	**W**ater and **S**anitation **P**rogram *(World Bank funded partnership)*

DEFINITIONS, INTERPRETATIONS AND LANGUAGE

Water	Affordable, available and safe drinking water and the management of water resources.
Sanitation	Management of excreta, from creation of household and public toilet facilities, through wastewater and faecal sludge treatment.
Hygiene	Promotion of health education and behaviours, including hand washing menstrual health management.
Faecal Sludge	A slurry that contains both solid and liquid waste, contained on-site sanitation systems *(pit latrines, septic tanks and container-based solutions)*.
Excreta	Waste matter eliminated from the body *(faeces, urine, blood)*.
Menstrual Health	Mental, social and physical well-being related to menstruation *(beyond the scope of physical material provision)*.

It should be noted that some of the terms used in this thesis are contextually specific, and potentially contested. The below definitions are not the only definitions for said language, they simply provide a guide to the terminology used in this thesis.

Cisgender	An identity in which a person's gender registered at birth corresponds to their current gender identity.
Caste *(India)*	A discriminatory social system that designates societal standing and occupation according to birth. Currently, Caste-based discrimination is a punishable offence, yet discrimination and practising 'untouchability' remains *(Jodhka, 2017)*.
Gender	A social construct that categorises societal roles, behaviours and expectations.
Intersex	Individuals born with combinations of sex characteristics who may not fit traditional binary notions of male or female bodies.
Non-Binary	An identity in which a person's gender falls outside the traditional categories of male and female. Identities can include agender, where a person does not identify as any gender, and genderfluid, where a person's gender identity changes over time.
Sex	An identifier used to differentiate persons based on biological markers.
Transgender	An identity in which a person's gender registered at birth does not correspond to their current gender identity.

Queer	A partially reclaimed identity denoting someone who identifies with characteristics of LGBTQ+, or those who don't feel the need to define their gender/sexuality for others.

Additionally, there are specific genders beyond men and women discussed in this thesis, especially when gender diverse communities are explored in Chapters 4, 5 and 6. However, it is not my role to define an identity specific to a culture I do not belong to, nor reduce it to gendered presentations and biological markers to make it more understandable for a wider population outside the community. These include identities such as Aravani, Hijras, Jogta/Jogappas, Kinnar/Kinner, Kothi, Sakhi. For further information about these identities, the author recommends readers to seek out voices from these communities discussing their identity in their own words.

Some of the phrases, terms and language used in this thesis have been anglicised and spelt phonetically from their native spelling and alphabets. In each case, consensus was drawn from native speakers on the most accurate way to transliterate a word/phrase. For example, in section 4.1 where the Indian Swachh Bharat Mission is introduced, the two key program components are stated as Swachh Bharat Urban and Swachh Bharat Grameen. Grameen literally means rural, but is more commonly used than 'rural' when speaking in English. The Hindi word can be literally transcribed as 'Grameen' or 'Gramin', but this thesis chooses to use Grameen as this was the more commonly accepted spelling amongst research participants.

This thesis consists of English interviews and Hindi Focus Groups. Reasonable efforts have been made to ensure accurate translations of Hindi discussions (local speakers with experience of engineering, social justice and human rights language), yet it is possible some words may have been mistranslated/misunderstood during the translation process.

1 CHAPTER I

RESEARCH DESIGN AND POSITIONALITY REFLECTIONS

This thesis investigated gender equality in WASH programmes at global, national, and individual levels, and documents the challenges of implementing gender guidance in development projects. There currently exists a tension between the intention to promote gender equality, and the challenges of ensuring it in practice. This work identified commonality in perceived challenges, pathways to avoid tokenistic involvement, and strategies for actively promoting gender equality in development. Using predominantly qualitative methods, the thesis centred government, activist and practitioner voices through interviews and focus groups, documenting how development programs curate gender-sensitive policy, and how it gets used in reality.

1.1 OVERVIEW

This thesis used mixed methods to collect information which enables the aims and objectives to be achieved. The research provided answers that fill a gap in the literature around the challenges that prevent incorporation of gendered measures in international development and national government programs. Qualitative methods were preferred as the research does not seek to generalise conclusions, nor does it intend to create statistically representative samples. The research's key questions revolved around identifying unknown challenges, and suggesting ways in which these challenges may be addressed, it did not seek to create an exhaustive list of challenges, nor does it rank or rate the identified factors. This is especially true for latter chapters (V and VI), where the studies specifically look at India. India itself is a large diverse country and challenges are not identical across state, city or village lines, so qualitative methods explore this reasoning and manifestation of challenges. The work in India formed the majority of this thesis, but it should be noted that the challenges and successes listed are not solely attributable to India. The lead researcher is not an Indian specialist, she is a gender inclusion specialist using India as an avenue to explore contextually specific challenges.

This thesis is delivered by the School of Civil Engineering, which would usually dictate the use of the scientific paradigm, and therefore a positivist attitude to research and data collection

(Scotland, 2012), generally insinuating that *"truth and reality is free and independent of the viewer and observer" (Aliyu et al., 2014, p.81)*. However, this research was intersectional, and focused on technical engineering elements, program design, and human behaviour and experience. It recognised that guideline and policy implementation is complex, and that objective truth cannot be ascertained from a subset of interviews carried out by a single researcher. Formulating generalisations without understanding underlying explanations and context was therefore avoided by using a relativist approach. Relativism states that personal truth is based on "intangible mental constructions, socially and experientially based, local and specific in nature" *(Guba and Lincoln, 1994, p.110)*. This thesis documented the perceptions of challenges and successes in relation to gender inclusion held by participants. It did not seek to assess the generalisable validity of the perception, but simply documents the frequency of the perceived experience.

As a Queer woman, feminist and Queer theory is personal and critical to the lead researcher's work. Gender has a complex relationship with society and infrastructure, and to accurately explore the experiences, the work needs to be driven by transdisciplinary theories. Feminist poststructural theory links to the paradigm of relativism as it argues that "reason is always situated, local, and specific, formed by values and passions and desires" *(St. Pierre, 2000, p. 487)*. The term 'Queer theory' was popularised by Teresa De Lauretis, and explores how Queerness moves "across disciplinary fields" *(De Lauretis, 1991, p.xvi)*, just as this research does. The word Queer is the preferred terminology for the communities at the heart of this research, potentially because "*the term Queer allowed for the possibility of keeping open to question and context the element of race – or class, age or anything else – and its often complicated, unpredictable relationship to sexuality" (Turner, 2000, p.133)*; 'Queer' allows for a non-divided community where multiple identities hold power, and different manifestations of intersectional identity exists. These theories drive ethical practices, inform data collection, and advise analysis and dissemination of findings by centring participant stories. As a response to the use of Queer and feminist theories and the prioritisation of Queer voices, one active way to apply a Queer lens to this work is through careful choice of authors, especially when discussing Transgender Rights.

> *"In engaging with these issues, we need to be mindful of the prejudice and marginalization Transgender people face, and ensure we don't add to it, for instance by giving voice to transphobic views or those questioning Transgender rights.*
>
> *(Boyce, P. et al., 2018, p.113)*

1.2 RESEARCH AIM AND OBJECTIVES:

PhD Aim: Assess the disparities between policy and practice for gender inclusivity in WASH across global, national and local levels, give voice to marginalised communities and identify pathways for truly transformative inclusivity approaches in sanitation.

The following objectives and associated activities address questions around the challenges that prohibit gender inclusion in development projects, beginning by curating a global knowledge base, furthering knowledge with a specialisation of gender manifestation in India's Swachh Bharat Mission, and finalising with the lived reality for Queer persons in accessing services they're not designed to use. The objectives evolved during the study, with research being led by participants and their requests, challenges and stories; the final objective was created as a direct result of the gaps identified during the second empirical study (Chapter 5).

1.2.1 Objective 1:

Investigate the Discrepancies Between the Stated Intentions and Actual Implementation of Gender Equality Practices in Evaluation Reports.

The first objective was to identify any disconnect between organisational promise to deliver gender equality, and the reality of how gender components are presented and included in major development programmes in WASH, and to evaluate the extent to which these gendered components are transformative in reality. Leading organisations in the water and sanitation sector were chosen for their apparent commitment to gender equality, to highlight their commitment to good practice, or to contrast the reality of a program result to the intention of said organisations. To document the reality of gender inclusive programming, a document analysis identified and ranked measures according to a Gender Integration Framework, which labelled practices insensitive, sensitive, responsive or transformative. This objective was covered by Chapter 3.

The activities associated with the objective are as follows:

i. *Systematically review multi-lateral organisation's WASH Project Evaluations;*
ii. *Analyse the prevalence of gender in WASH Evaluations using a gender inclusion Framework;*
iii. *Conduct primary data collection to validate self-identified challenges in inclusion implementation.*

Novel research: To date, there has been no systematic cross-agency assessment of gender incorporation in WASH development agency investments, despite key development agencies affirming gender equality and equity commitments within their organisation's policies. This research will therefore provide a valuable and novel evaluation of development agency

performance in this domain, using a current gender inclusion framework, to highlight the extent to which gender is included and incorporated in project reality.

1.2.2 Objective 2:

Examine the Failure Modes of Gender Equality Implementation in Swachh Bharat Phase 1.

After establishing gender inclusive practices are not intrinsic to development programs, regardless of intention, a more focused study investigating why challenges persist was required. Objective 2 contributed to scholarship by assessing usability, reality, and practicality of including gendered measures in national programming, given that gender equality was a noted priority in the policy documentation. For this investigation, a large-scale national program with multiple layers of interaction was selected, the Swachh Bharat Mission (SBM) in India. National guidance states the need for gender equality principles, but after Phase 1 concluded, an analysis of the gender guidance usage and resulting gender prevalence was not investigated. This objective was covered by Chapter 5.

The activities associated with the objective are as follows:

1. *Conduct primary data collection to document gender guidance usage in SBM;*
2. *Use a Failure Framework to analyse perceived challenges in implementation;*
3. *Document barriers that prohibited gender guidance being integrated into implementation.*

Novel research: No article exists that documents the perceptions of challenges in relation to gender guidance uptake in the SBM. Gender Guidance was curated for the implementation of the National Mission, but neither its usage nor potential barriers to misuse were tracked. This work details social and technical factors affecting the uptake of Gender Guidance throughout the mission, across 4 states, with the public and private sector. Using a Failure Framework for analysis, challenges are identified in States that were seen to be highest achieving, showing the obvious lack of commitment to gendered needs.

1.2.3 Objective 3:

Apply a Dual Perspective Grounded Theory Approach to Investigate Policy Makers' and Queer Communities' Perspectives on Queer Access to and Usage of Sanitation.

Upon completion of the prior objective, there was a clear research gap as to how gender diverse communities were managing to access sanitation. This objective resulted in

documentation of the policies and their curation methods, building on the information missing in the prior interviews to explain the recurring barriers of dismissal, exclusion or avoidance of engagement with gender diverse persons. It built upon the challenges suggested by Objective 2 interviewees (Chapter 5), to create a detailed picture of access and the associated challenges on personal, societal and governmental levels. The national constitution recognises that gender diverse individuals exist, yet gender guidance and policies repeatedly isolate the community, this section documents the stories and experiences of Queer persons in Rajasthan using a grounded theory based approach to give voice to those excluded in from the mainstream. This objective was covered by Chapter 6.

The activities associated with the objective are as follows:

I. Conduct Interviews to explore government-led gender diverse programs;
II. Conduct Focus Groups to document sanitation access for Queer participants;
III. Identify the key barriers and recommendations for increasing inclusion for diverse communities.

Novel research: When searching databases[1] for any work relating to Transgender and gender diverse experiences of WASH services and facilities, only four relevant papers were identified; it is therefore evident that this space has lack of focused research. There were 487,000 recorded Transgender individuals in India as per the last census in 2011 (Government of India, 2011), which is thought to be dramatically underreported (Behal, 2021), and although these communities have legal representation in the India Constitution (Transgender Persons (Protection of Rights) Bill, 2019), their rights and access to sanitation is unresearched. In order to ensure 'no one is left behind' as highlighted by the UN Sustainable Development goals (UNDP, 2018), and to improve service provision at a national level, current exclusion needs to be addressed to ensure everyone has access to safe, hygienic and accessible sanitation.

1.3 RESEARCH STRATEGY

The three objectives of this study directly correlate to three chapters in this thesis. Objective 1 is explored in Chapter 3, Objective 2 in Chapter 5, and Objective 3 in Chapter 6. Although the description of work is very linear, the process was somewhat inductive and developed as the research progressed: Objectives 2 was influenced by the results of Objective 1, and Objective 3 after satisfying Objective 2. The explorative nature of inductive objective curation allowed for richer reflections and a piece of research that was driven by the participants.

Table 1 maps the research objectives to their associated data collection and analysis methods.

[1]The following String was searched in Scopus ("south asia" OR india) AND (Queer OR lgbt* OR Transgender OR "third gender" OR "3rd gender" OR hijra) AND (wash OR hygiene OR water OR sanitation). This yielded nine total results, four of which were relevant for this research.

Table 1 – Mapping Aims, Objectives, Research Activities and Methods

PhD Aim: Assess the disparities between policy and practice for gender inclusivity in WASH across global, national and local levels, give voice to marginalised communities and identify pathways for truly transformative inclusivity approaches.		
Objectives	***Research Activities***	***Data Collection Method***
Objective 1: Investigate the Discrepancies Between the Stated Intentions and Actual Implementation of Gender Equality Practices in Evaluation Reports. **[Chapter 3]**	A global review of practices and challenges associated with integrating gender equality. *I. Systematically review multi-lateral organisation's WASH Project Evaluations;* *II. Analyse the prevalence of gender in WASH Evaluations using a gender inclusion Framework;* *III. Conduct primary data collection to validate self-identified challenges in inclusion implementation.*	- *Literature Review (Evaluation Reports)* - *Thematic Analysis according to the Adapted Gender-Integration Framework (MacArthur et al., 2023)* - *Consensus Moderation Survey*
Objective 2: Examine the Failure Modes of Gender Equality Implementation in Swachh Bharat Phase 1. **[Chapter 5]**	A case study of gender guideline implementation during the SBM. *I. Conduct primary data collection to document gender guidance usage in SBM;* *II. Use a Failure Framework to analyse perceived challenges in implementation;* *III. Document barriers that prohibited gender guidance being integrated into implementation.*	- *Literature Review (Government Policy)* - *Discourse Analysis according to the System of Innovation Policy Framework (Woolthuis et al., 2005)* - *22 Interviews (6 Government, 12 NGO, 4 Activists)* - *Practitioner Focus Groups (5 people) & 3 Community Focus groups (51 people)*
Objective 3: Apply a Dual Perspective Grounded Theory Approach to Investigate Policy Makers' and Queer	A grounded-theory informed approach to document Queer experiences during SBM. *I. Conduct Interviews to explore government-led gender diverse programs;*	- *Literature Review (Government Policy)* - *6 Interviews (4 Government, 1 Academic, 1Activist)* - *Queer Focus groups (14 people)*

Communities' Perspectives on Queer Access to and Usage of Sanitation. **[Chapter 6]**	*II.* *III.*	*Conduct Focus Groups to document sanitation access for gender diverse communities;* *Identify the key barriers and recommendations for increasing inclusion for diverse communities*	- *A grounded theory informed approach*

1.3.1 Data Collection and Analysis

Detailed methods explaining data collection and analysis processes for the empirical chapters have been given in the respective chapters. The following section provides an overview of the types of methods and justifications used, to provide a summary of the research endeavour.

Chapter III: Global Disconnect Between Intention and Reality

To establish the relationship between policy and practice of holistic gender inclusion in development programs, analysis of world leading organisations was carried out.

Amongst international agencies, two have the largest and longest running WASH programmes, The World Bank and UNICEF. The public databases of these organisations were searched to document practices relating to gender-based outcomes in final program evaluations. Of 5025 documents, 55 met the inclusion criteria and were selected for analysis (English, final evaluation of a program, WASH-based, includes gendered elements or language). The practices in these evaluations were then categorised according to the Adapted Gender-Integration Framework *(MacArthur et al., 2023)*, which classifies interventions between gender in-sensitive (unaware of gender dynamics), and transformative (transformation of norms and structures) approaches.

To triangulate findings from the evaluations, a consensus moderation survey was carried out to document personal experiences implementing gender inclusion in WASH. The 37 participants were recruited purposively through university networks and social media platforms, and needed experience of WASH programs and Gender Guidance use to be eligible. Given the small and self-selected nature of the sample, it was deemed inadequate for quantitative statistical analysis, therefore descriptive statistics were employed to assess consistency, utilising agreement with pre-established statements as the metric. The Online Survey Tool collected password protected, GDPR compliant, and ISO 27001 standard certified data which was processed with NVivo.

Chapter V: Gender Guidance Usability and Implementation in SBM Phase I

To explore perceptions of gender inclusion in SBM, 22 interviews and 5 focus groups were held with government staff, activists, NGO-workers, academics and community members. Data were recorded according to COREQ guidelines for processing qualitative research *(Tong et al., 2007)*, and were open-ended and discursive to allow for participant led discussions. Interviews were carried out in English at the request of the participants, took approximately an hour unless the participant asked to continue the discussion longer, and were carried out at participants place of work, public cafes or virtually. Focus groups took place in Hindi with a partner organisation, and involved short discussions following existing community meetings. Sampling was purposive and subsequently snowballed, potential participants were identified through work and social media profiles that stated historical work on gender and SBM. The study locations (New Delhi, Hyderabad, Jaipur and Chennai) were chosen through a positive deviance approach to identify commended and high achieving locales. The results of this study transformed the intention of the work from a positive deviance study to an innovation failure study, with the system of innovation (SI) policy framework *(Woolthuis et al., 2005)* being used to categorise barriers for gender inclusion.

Chapter VI: Realities of Sanitation Access for Queer People

Gender guidance was not continually followed during implementation of the SBM phase I, but even if it was Queer people would have remained underserved. This chapter evidences the reality of sanitation access through in-depth open-ended focus groups with queer participants (2 focus groups, 14 members total), and interviews with key informants (6) who design and implement sanitation programs with gender diverse communities. Focus groups were carried out in Hindi, were translated by the research partner, and lasted an hour. Interviews were carried out in English and took between 30m and 2hours (both factors at the request of the participant). Focus group participants were selected through convenience sampling, as a research partner had existing Queer groups they worked with, and so I was invited to their sessions. Purposive and snowball sampling was used for interviews, to identify actors actively working on sanitation for gender diverse or Queer communities. A grounded theory approach was used for analysis of data which applies constant comparison analysis to organise data into overview themes. Inductive analysis was preferred to allow for Queer voices to lead discussions.

1.4 ETHICAL CONSIDERATIONS

This research was given Ethical approval by the Engineering and Physical science Research Ethics Committee at the University of Leeds on 26th April 2022 and again with amendments on 12th January 2023, with reference MEEC 21-020.

Prior to all interviews and FGDs, participants were given a Consent Form (Appendix A), a Participant Information sheet (Appendix B), and a Research Participant Privacy Notice (Appendix C). These had to be read and signed before conversations were allowed to begin.

The survey (Chapter 3) collected participant's current and previous job sector and gender, Interviews (Chapter 5 and 6) collected participants' gender, job sector and state location, and focus groups (Chapter 5 and 6) collected participants gender, and the name of the collective community.

During the survey, interviews and focus groups, the lead researcher reiterated the importance of free choice to participate, and ability to withdraw from the research at any time. Participants were not paid for their time lest ethical questions around payment bias surface; the minor exception being the covering of travel costs for the focus groups discussions.

As research actively involved documenting human experiences, in particular, the experiences of Gender and Sexually Diverse Persons, the Montréal Ethical Principles for Inclusive Research *(Henrickson et al., 2020)* were adhered to. These principles guided the manner in which discussions were held, the phrasing of questions, and the resulting write-up of the data.

Respect the Dignity of All Research Participants

Engage with the Taxonomy and Language of Participants

Assume that Binarized Cisgender Heteronormativity will have an Impact on the Lived Experiences of Gender and Sexually Diverse Research Participants

Recognize Intersectionality and Its Impact, Including Indigeneity, Race, Ethnicity, Religion, Class, Gender, Age, Language, Culture, Colonization, Dis/Ability, and More

Acknowledge Multiple Epistemologies

Appreciate that Information from Gender and Sexually Diverse Persons and Communities Acts Indigenously

Avoid Problematizing or Pathologizing the Lived Experiences of Gender and Sexually Diverse Research Participants

Interrogate Researcher (or Ethics Panel Member) Assumptions and Experiences (Whether or Not the Researcher or Panel Member is an Insider or Outsider to the Community)

If a Participant is (Legally) a Young Person or Other Dependent Person, Prioritize the Informed and Voluntary Consent of the Research Participant Over the Need for the Consent of a Guardian

Ensure Adequate Compensation for the Time Participants Commit to the Research Project

Generate Theory from the Lives of Research Participants

Taken from Montréal Ethical Principles for Inclusive Research

(Henrickson et al., 2020, p.6-9)

1.5 MOTIVATIONS FOR THIS THESIS

In 2019 I completed my undergraduate dissertation, exploring the drivers of menstrual health disposal and washing behaviours. Working across disciplines meant joining technical engineering design skills with new social science methods, critiques and theories. Part of this included active attention to the specific language used around framing gender. Although I aimed for representation across multiple genders, almost all the data collected came from cisgender women. Nevertheless, I chose to use the term menstruator to be inclusive of all people who menstruate, to ensure Transgender, non-binary and other identities are not othered by my terminology. I did not think much more about this until 2021 when I published the results in a Journal Article with PLOS One *(Robinson and Barrington, 2021)*.

My use of inclusive language stirred up transphobic views across X (formerly Twitter). In now deleted Tweets I received the following messages:

"SOD OFF with your inclusivity when it erases women and girls and their rights and protections".
Author and Journalist of 'hidden, taboo, ignored or misunderstood' subjects

"I really object to being called a menstruator. Its far too Handmaid's Tale."
Human Rights Campaigner of the Year (2013) & Writer with 500,000 books sold

"Stop erasing the history of women!"
Academic researching women's health

It was then that I realised first-hand how transphobic, and non-inclusive a lot of 'feminist' researchers and practitioners could be. I wanted to continue working on WASH, but needed time to explore gender holistically in a way that is often overlooked by the sector; who is really included in gender and how do we ensure feminist principles do not leave anyone behind?

1.6 POSITIONALITY AND PERSONAL REFLECTIONS

As a global north researcher predominantly exploring gender equality implementation in the global south, I have questioned my legitimacy in the field and reasoning for doing this PhD. I have been given an opportunity to explore a topic I connect to (gender equality) and was able to freely choose a study area for this work. This privilege stems from being a researcher in an

internationally recognised University, with a substantial research budget, international connections, and a British passport. Although I am unable to conduct this research in my home country (the UK government does not legally recognise multiple genders in national legislation, nor does it actively promote gender equality in sanitation), being afforded the option to choose another country as opposed to changing the research focus is a huge privilege. Multiple academics I spoke to on this trip spoke of wanting to conduct similar research, but could not be afforded the time, financing or access to participants that I have been given. Where possible I tried to design research methods, including interview guides, with other academics and activists to coproduce materials, but there was and always will be guilt attached to this work. Why as a white woman from the North East of England should I have the opportunity to do this work when peers do not?

Especially in India, I am an obvious outsider to this work. I am someone who is proficient only in the colonial language, is visibly 'European' and will never truly understand what it is to be Indian. It does mean that my initial limited understanding of India meant for few preconceived assumptions, and a lens of partial objectivity, but this did not always account for positive exchanges. My identity creates a dichotomy in my research methods and my access to knowledge providers. I know that my privilege as a white global north researcher at an internationally leading institution has provided opportunities to interview persons for this research that my Indian colleagues and peers have never, and potentially will never have access to. I had the opportunity to enter these spaces, yet when I was able to access these places, my identity gave participants reasoning to deflect questions and critiques on the basis I was confused or did not understand the reality. My identity was used multiple times to make assumptions about my knowledge; in one government interview I was told I was an '*uncultured white girl*' who did not understand the country. This specific conversation was around Transgender discrimination, in which I was directly (but anonymously) quoting experiences of research participants and prominent LGBT local charities, but still it was assumed I had misunderstood and misrepresented their experience, and was providing false information as an outsider.

I therefore had to find ways to try to create and build trust quickly as an obvious outsider to allow for at least partially honest and open discussions. Throughout interviews and focus groups I always tried to use personal observation in conjunction with current local working papers, national government legislation, NGO publications and participant experiences to demonstrate my understanding and active engagement with the topics I was working on. Another way I tried to gain participant trust was through open-ended semi-structured interviews. I always had questions I wanted to ask, but almost every discussion provided answers to different queries. I needed participants to understand I wanted their honest opinions, and needed them to trust I would not judge the answers. This meant many times conversations diverged from the main research focus. But in doing so, richness was achieved in

cultural understanding, personal motivation and at times led to a new avenue to explore the research in. This allowed for 'getting lost in the process' at times, and divulging from the main research course, but always ultimately created a deeper understanding of a complexity tied to the research.

The trust and honesty present in a discussion often changed throughout a conversation, and to note, it was often more difficult to build with governmental staff, who were typically more closed off, especially when discussing challenges or critiques. In one instance a staff member had begun the interview with short factual answers with minimal exploration of the questions, as I proceeded and they relaxed, they began to expand on work, to the level of discussing challenges very openly. I then felt the participant become aware of what they had freely been speaking about, and they immediately became clearly uncomfortable, widening their eyes and ending the discission in favour of highlighting a successful but unrelated story.

In addition to methodological approaches to research, I had to learn how to best assert and introduce myself dependant on who my participants were. I realised that Government staff were more responsive if I introduced myself as an Engineer, NGOs were more receptive to an introduction as an Activist or a Researcher, and gender diverse groups were more receptive when introducing myself as a Queer person. All of these titles are accurate and reflect different aspects of my identity, but played key roles in how I was perceived. In addition to this my clothes and jewellery often affected my reception within an organisation. At first wearing kurtas and other traditional south Asian clothing felt like cultural appropriation, it wasn't my clothing and I didn't feel like I had a right to wear traditional outfits as an outsider to the country. Yet I soon realised this was a key pathway to be respected, so off to the market I went for kurtas, dresses, saris and jhumkas in every colour of the rainbow, and although I don't wear my saris often in Leeds, my jhumkas get frequent outings.

Developing relationships with supporting organisations was one of the most difficult aspects of this PhD. For both chapters 5 and 6 multiple organisations were contacted to act as community gatekeepers, this was done online before overseas trips, and in person. Of the ten contacted, eight decided that they did not have the time, capacity or knowledge to guide the research. Ultimately, two organisations were responsible for helping design, curate and collect research for this project. They aided with finding and suggesting interviewees and potential focus group areas, planning site visits, helping with in-country administration, and providing general support during the research trips. However, there were concerns that being associated with research that critiques the government of India's national missions could have negative ramifications. Both organisations currently receive funding from the Government, and voiced concerns about being associated with a piece of research which showed explicit critiques. Although the analysis was carried out independently, so conclusions are not to be attributed to the organisations, both parties asked to have their name removed from this work.

I wanted to ensure whoever was co-producing and co-designing this work could get fairly paid for any time contributed to the program. However ultimately this was not possible, and is likely part of the reason organisations withdrew from potential partnerships. Recently anecdotal evidence exists that demonstrates NGOs working on controversial topics, and taking international funding, have been closed down.

> *"The environment is currently so hostile towards a civil society, a lot of civil society organisations are having to shut down or not work on controversial topics by the government. The government dispensation of course has it, intimidation tactics in place, you know? Which include stopping with the funds that come from foreign sources. That's the main tool that the state has in order to silence the NGOs of a civil society." (Chapter 6 Study, KII 1 (evidencing NGO closure over funding))*

Organisations could have stated disinterest because of this; taking international funds could prove problematic, and they didn't have capacity to help for nominal costs. I never expected nor wanted to work with organisations where I was only able to cover participant transport/small equipment costs, but fear of organisational closure meant organisations didn't want to take large international funds from the UK. Ultimately friends I made whilst in country helped as individual researchers, and convinced organisations the work would be worth the small amount of time needing to be invested. For those friends, I am forever thankful.

The title page of this thesis states the research was guided by Ravikirankumar Bokam, Pranav Singh, and Snehalatha Mekala. In addition to the anonymous organisations, these three independent persons (activists and academics) helped to guide the work by identifying stakeholders and organisations, in addition to providing valuable personal support. They all began as colleagues of the research team, and ended as close personal friends who this research is partly attributable to. This is especially true of Ravikirankumar Bokam, who managed and ran the focus group discussions for Chapter 6.

I will never claim that the months spent in India brought me closer to becoming an 'insider', but I do think I have become at minimum an 'informed outsider' during my time away from the UK. This research, is rooted in active ethnographic practice; I tried to engage with every experience I could to create deeper cultural understanding of the country, both personally and professionally. Throughout the research I made lifelong friends with participants, supporting organisations, students at local universities, and sometimes also their families. These friends shared their lives and food, taught me to dance, how to tie a sari and kept teaching new Hindi words and phrases with every interaction. Although I only spent a handful of months in India, I wanted to experience as much as I was able and was privileged to be able to get involved

with every experience possible. I was able to visit 13 states[2], attend a week-long wedding, dance at Holi celebrations, swim in the Ganga[3], camp in the Himalayas and sing to a slightly chaotic playlist of Eurovision, Hindi Pop and Punjabi Rap whilst driving across state lines. These experiences threw me into cultural experiences in a way reading books, watching movies and conducting online research was never able to achieve.

[2] New Delhi, Uttar Pradesh, Haryana, Rajasthan, Punjab, Chandigarh, Himachal Pradesh, Uttarakhand, Maharashtra, Goa, Telangana, Tamil Nadu, Kerela

[3] The Ganga is India's holy river, internationally known by the westernisation 'Ganges'

2 CHAPTER II

INTRODUCTION AND FRAMING LITERATURE

2.1 KEY CONCEPTS FOR UNDERSTANDING THE THESIS

This thesis explored the concept of gender, and how it influences access to, and decisions around, Water, Sanitation and Hygiene (WASH) facilities. The following section explores the key concepts of WASH, gender, and development, and how in turn they influence and intertwine with each other. The research explicitly explored these three concepts as each one shapes a project's outcome, yet they are rarely considered together. The three components intersect to create a complex space that has been built on throughout the thesis. WASH, Gender and Development have been defined and explored below to give grounding and context to the research, beginning with simplified explanations, then moving into more nuanced understanding.

2.1.1 Water, Sanitation and Hygiene (WASH)

Access to WASH is essential for living a healthy life, and the three components (water, sanitation and hygiene) represent an approach to manage public health outcomes. The preferred definitions for the components of WASH are stated below:

I. **Water** covers affordable, available and safe drinking water and the management of water resources.
II. **Sanitation** refers to the management of excreta, from creation of household and public toilet facilities, through wastewater and faecal sludge treatment.
III. **Hygiene** covers the promotion of health education and behaviours, including hand washing menstrual health management.

As of 2020, 54% of the world did not have access to safely managed sanitation, 30% did not have access to safely managed water, and 33% did not have access to basic hygiene facilities *(WHO, 2021)*. Multiple international events have helped to promote the need for advocacy and action around WASH. The first global acknowledgement of WASH came with the designation of the International Drinking Water Supply and Sanitation Decade (IDWSSD) (1981-1990), the period intended to focus on 'health for all'. Unfortunately the decade was widely criticised for its inability to *"adapt its approach, or acknowledge the broader issues of politics, economics, natural resource restrictions and institutional capacity" (O'Rourke, 1992, p. 1937)* This criticism directly

connects to why this work is by nature intersectional and interdisciplinary – it cannot look solely at the technical or social elements of WASH, but must connect them.

Since then another two international decades have been specified, 'Water for life' (2005-2015) and 'Water for Sustainable Development' (2018-2028). The UN also officially recognises multiple days that focus on WASH to further publicise the need for continued commitment: World Water Day (22nd March, beginning 1992), World Toilet Day (19th November, beginning 2012), Global Handwashing Day (15th October, beginning 2008), and World Menstrual Health Day (28th May, beginning 2014). In addition to the publicity of the specified days and decades, the Millenium Development Goals (MDGs) and Sustainable Development Goals (SDGs) were created to produce a call to action, these will be further explored in Section 2.1.3 as they are intrinsically connected to the core concept of development.

International targets that call for universal access to basic services are set by the United Nations General Assembly. For WASH, indicators are chosen and reported by the JMP (Joint Monitoring Board - a partnership between the World Health Organisation and UNICEF), and refer to the proportion of a country that had access at a particular service level. Data is collected at the household level, in addition to health care facilities, and at school. The indicators mildly differ across the core components: Water *(surface water, unimproved, limited, basic, safely managed)*, Sanitation *(open defecation, unimproved limited, basic, safely managed)*, and Hygiene *(no facility, limited, basic)*. Table 2 defines Basic and Safely Managed Services at the household level, giving an example of the definitions used to measure service access.

Table 2 - JMP Definitions for Basic and Improved WASH Services *(JMP, 2018a; JMP, 2018b; JMP, 2018c)*

	Basic	**Safely Managed**
Drinking Water	*Drinking water from an improved source*, provided collection time is not more than 30 minutes for a roundtrip including queuing*	*Drinking water from an improved water source* that is accessible on premises, available when needed and free from faecal and priority chemical contamination*
Sanitation	*Use of improved facilities** which are not shared with other households*	*Use of improved facilities** that are not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite*
Hygiene	*Availability of a handwashing facility*** with soap and water at home*	

** Improved drinking water sources are those that have the potential to deliver safe water by nature of their design and construction, and include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water*

*** Improved sanitation facilities are those designed to hygienically separate excreta from human contact, and include: flush/pour flush toilets connected to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets*

**** Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.*

These targets do not necessarily convey preciseness about quality of services, but were specified as they are measurable indicators for global data collection. Their limited scope does mean they *"fail to reflect the complexity of multiple sources, changing over time"* and that *"all forms of service are considered equal despite their widely varying benefits"(Bradley and Bartram, 2013, p. 6)*, however the narrowness does mean they are easily transferable across contexts, and have definitive ways of being measured. In addition to the JMP data, the Global Assessment and Analysis of Sanitation and drinking water (GLAAS) attempts to examine the criteria through more qualitative work, specifically examining national standards. However, this is self-reported by governments, so is less internationally consistent.

WASH facilities and services are governed by widely varying national standards, across different countries *(Sugden, 2014)*. Those in higher income economies often have facilities that go beyond what is stipulated as a basic service, yet in lower income settings, especially where latrines may be constructed with financial inputs from external support agencies and INGOs, they "*have tended to be designed from a purely functional perspective*" *(Sugden, 2014, p. 220)*. When designing services in lower income settings, the standard has previously been to comply with what is stipulated as basic in order to adhere to international targets, resulting in unintegrated service infrastructure *(van Welie and Romijn, 2018)*. Focusing on basic unintegrated services is partly what drives inappropriate facilities; exclusion of long-term sustainability and maintenance plans of newly constructed facilities is bound to lead to negative consequences.

Basic sanitation should be what is deemed essential. However, what constitutes a basic facility does not mention the need for security or privacy explicitly. This does tie in with difficulties of measuring attitudes around safety and security, but does not mean that it should be aspired to be measured. Building standards for toilets differ from country to country, but excluding key aspects that directly relate to safety when looking at what is classed as 'basic' needs, draws on what people define to be essential regarding sanitation. Article Three of the Universal Declaration of Human Rights states that every individual has the right to security of person *(United Nations General Assembly, 1948)* and excluding explicit safety from basic sanitation definitions only harms users.

'Some for all, not all for some' reflects this mentality where a higher quantity of lower quality services is provided over a low quantity of high quality services *(Africa National Congress, 1994)*. What needs to be understood is what items constitute the basic threshold for a safe

sanitation facility that improves well-being. There is a need to balance costs with outcomes, but a minimum level for services is essential to deliver on human rights, only beyond that should cost be a factor.

Water and Sanitation as a Human Right

Water and sanitation have been recognised by the UN General Assembly as interrelated but individual Human Rights for 14 years *(United Nations General Assembly, 2010)*. The original resolution recognised that safe and clean water and sanitation were "*essential for the full enjoyment of life and all human rights*" (p.2), but did not address the need for progressive action and the role of discrimination in access. This was later addressed in 2016 through a resolution to expand the understanding of safe services:

> *"Progressive realization of the human rights to safe drinking water and sanitation for all in a* ***non-discriminatory manner*** *while eliminating inequalities in access, including for individuals belonging to groups at risk and to marginalized groups, on the grounds of race,* ***gender****, age, disability, ethnicity, culture, religion and national or social origin or on any other grounds, with a view to* ***progressively eliminating inequalities*** *based on factors such as rural-urban disparities, residence in a slum, income levels and other relevant considerations."*
>
> *(United Nations General Assembly, 2016)*

This resolution should create awareness for states' obligation to promote water and sanitation in policy advocacy *(Gosling et al., 2022)*, yet having awareness at a high political level may not be sufficient to create active change with decision-makers, practitioners and sector experts *(Roaf et al., 2018)*.

2.1.2 Gender

Gender is a social construct that links cultural, social, and behavioural roles, attributes, and expectations. It is not just individual personalities, motivations and behaviours, but how peoples' lives are shaped, especially by family, religion and the economy *(Johnson, 2014)*. It can encompass both expression (outward presentation) and personal identity (self-disclosed, personal), and is something that is often performed around and for others *(Butler, 2004)*.

Patriarchy influences the way individuals experience gender, and the constraints on society by which roles, attributes and expectations play out; in patriarchal structures anything feminine or androgenous is defined to be, and viewed as, inherently weaker. Kandiyoti examines these

constraints as patriarchal bargains, which she discusses in relation to women, but can be extrapolated out to include all non-male genders, and the constraints patriarchy imposes on men themselves:

> *"Women strategize within a set of concrete constraints, which I identify as patriarchal bargains. Different forms of patriarchy present women with distinct "rules of the game" and call for different strategies to maximize security and optimize life options with varying potential for active or passive resistance in the face of oppression" (Kandiyoti, 1988, p.294)*

Gender is inherently tied to discussions around what is commonly referred to as LGBTQ+, a community of individuals who have diverse gender identities and sexual orientations. The community has differing collective names based on many social factors (geography, language, history, personal preference, and social class), but often uses 'umbrella' terminology such as LGBTQIA+ (lesbian, gay, bisexual, Transgender, and Queer and/or questioning, intersex and asexual) or Queer. When discussing work in support of these communities, the following terminology may be used, SOGISEC (sexual orientation, gender identity and expression and sex characteristics), SDGIE (sexual diversity, gender identity and expression), or GSM (Gender and Sexual Minorities).

One way the development sector is trying to create change is through inclusive language guides aimed at understanding inherent flaws in language use, and providing pathways to create better practice. Oxfam published their Inclusive Language Guide in 2023 that covered feminist and decolonial principles, disability, gender and sexuality, migration, race and power, acknowledging the need to *"ensure that our language does not imply concepts that are patronizing or reinforce stereotypes"(Oxfam, 2023, p.6).*

Gender intersects with other identity characteristics such as sexuality, race, caste, and disability, influencing social inequality. This thesis advocates for an intersectional comprehension of identity and the way power dynamics and systems of oppression compound to produce inequity. Research in this thesis predominantly explores gender in relation to its manifestation in development programming, but explores connected characteristics of caste and sexuality when appropriate.

2.1.3 Development

International Development is a discipline that idealistically seeks to address economic, social, political, and cultural challenges globally. However, the intrinsic imposition of coloniality is evident, it is an agenda to move someone, something, or somewhere towards idealistic standards imposed by primarily *western* nations.

"The word [development] always implies a favourable change, a step from the simple to the complex, from the inferior to the superior, from worse to better… It is a reminder of an undesirable, undignified condition. To escape from it, they need to be enslaved to others' experiences and dreams." (Esteva, 2010, p.6)

The language of development

Development is and continues to be rooted in white saviourism and colonial legacy, whether intentional or unintentional, and the language used to categorise states, countries and areas continues to impose false hierarchies.

"The practice and vocabulary of global health and global development today have their origins in racism and colonialism, which has created a false hierarchy among nations" (Khan et al., 2022, p.1)

The language used perpetrates segregation of states, into providers and receivers, or donors and beneficiaries. The lines by which separation can be drawn tends to revolve around economic classification (e.g. LIC, low income country), which fail to account for resources, human capacity, skill, and associated historical reasoning which is often colonial in nature *(Khan et al., 2022)*. Khan el al's 2022 article seeks to document the origins and concerns with development classification of countries, exploring the issues relating to language such as '3rd world countries', 'developing countries/developed countries', 'new world/old world', 'global north/global south'.

Dichotomies create the sense of an inherent hierarchy between countries and regions. But they can also reinforce a sense of superiority among those whom the language implies are superior, and a sense of inferiority among those assigned the mantle of negative or othering descriptors." (Khan et al., 2022, p.2)

Language should be used with awareness of its origin, to ensure ambiguous terminology (*1st vs 3rd world*) or categorisation with racist connotations (*developed vs developing*) are avoided. Language choice should be thoughtful, and "*resit oversimplified dichotomies*" *(Khan et al., 2022, p.3)*; oversimplification depicts countries such as the UK as developed and democratic nations, without notions of inter-societal inequality. Other scholars have begun to use the terminology 'majority world' to refer to those formally classified as '3rd world' or 'developing' to highlight that these countries have the population majority globally, and cannot be overlooked *(Alam, 2008)*. Active language choice shapes the terminology in this thesis, with research avoiding the homogenisation of continents, or geographical areas, simply drawing facts and experiences from specific areas without oversimplification of geography and history.

Sustainable Development Goals

The Sustainable Development Goals were introduced in 2015 to influence development practices until 2030. Although they are not specifically a development concept, as they are universal targets for all UN member states, they do shape the landscape of development. The 17 goals, 169 targets and 230 indicators cover differing criteria for poverty alleviation and curation of sustainable services, including monitoring hunger, heath, education, gender equality, water and sanitation, energy, climate, and focusing on creating more resilient, just, accountable and inclusive societies to 'transform to the world' *(United Nations General Assembly, 2015)*. There is a focus on 'leaving no one behind' by focusing on inequalities that *"disproportionately affect particular groups on the basis of race, sex, language, religion, age, ethnicity, disability, migrant or economic status, and so on" (United Nations, 2017, p.3)*.

The SDGs have been divisive, with the agenda being labelled *"SDGs: Senseless, Dreamy, Garbled" (Easterly, 2015)* and *"worse than useless" (The Economist, 2015)*, due to their unactionable, unquantifiable and unattainable targets, with scholars calling for caution around promotion of global priorities that could overshadow local concerns and priorities *(Ruano et al., 2014)*. However, the global attention creates a platform for awareness, and creates space for conversations globally on poverty alleviation that address a wider criteria than the former Millennium Development goals (MDGs): the SDGs *"incorporate a broader and more transformative agenda that more adequately reflects the complex challenges of the 21st century" (Fukuda-Parr, 2016, p.43)*.

The intention for global coordination has opened financing such as the SDG Joint Fund, which finances initiatives focusing on knowledge-sharing, capacity-building, data, financing, and partnerships, across 100 partners *(The World Bank Group, 2019)*, currently funding 230 programmes, facilitating 1000+ partnerships across 119 countries, with 29 UN entities *(Joint SDG Fund, 2023)*.

Regardless of their critique, they influence the donor and development landscape, shaping country priorities. WASH is covered by SDG Goal 6, with the key targets relating to safe and affordable drinking water, and adequate and equitable sanitation, with an intended focus on gender (that presents as women and girls):

> ***SDG 6**: Ensure availability and sustainable management of water and sanitation for all*
>
> ***Target 6.1**: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.*

> ***Target 6.2**: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.*
>
> *(United Nations General Assembly, 2015, p. 18-19)*

There are 6 targets under Goal 6, with the first two being most relevant for this research (6.3-6.6 cover water quality, water-use efficiency, water resources management, and ecosystems), and a further two means of implementation targets. These related implementing targets specify the need to "*expand international cooperation and capacity-building*" to support 'developing countries' and to "*support stakeholder participation*" through local engagement in sustainable and participatory water and sanitation management *(United Nations, 2018)*. Although designed to provide structure towards achieving outcomes, these targets are seen to be "*imperfectly conceptualised and inconsistently formulated*" *(Bartram et al., 2018)*.

Although the goals are distinct, they are intended to work in conjunction with related objectives, especially goals 5, 10, 16, and 17 (gender equality, reducing inequalities, creating just institutions and strengthen the means of implementation) *(Roaf et al., 2018)*. In a 2021 assessment of connections across all the SDGs, it was evidenced that all goals and 77% of all targets showed synergy between sanitation and the individual thematic elements, with 49% of targets calling for action in the sanitation sector *(Parikh et al., 2021)*.

Goal 5 (Gender Equality) is particularly relevant for this work on gendered perspectives of WASH, however the targets (5.1 - 5.6) and means of implementation (5.7 – 5.9) do fall into the sectoral tendency to equate "gender" with solely women and girls:

> *Target 5.1 End all forms of discrimination against all **women and girls** everywhere*
>
> *Target 5.2 Eliminate all forms of violence against all **women and girls** in the public and private spheres, including trafficking and sexual and other types of exploitation*
>
> …
>
> *Target 5.5 Ensure **women**'s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life*
>
> *5.7 Undertake reforms to give **women** equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws*

5.8 Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of ***women***

5.9 Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all ***women and girls*** *at all levels*

Sustainable Development Goal 5: Achieve gender equality and empower all women and girls (United Nations General Assembly, 2015, p. 18)

The definition is not specifically trans-exclusive, however in the official resolution, the words LGBT/LGBTQ+/LGBTQIA+/ SOGIESC/Queer/Transgender never appear. There is never clarity regarding if 'women' refers to only cisgender women, or to a wider more inclusive definition of women. Regardless, the gendered targets definitely fail to explicitly call attention to non-binary identities in the gendered section. Additionally, *"'sex" and "gender" appear to be used interchangeably"* across SDG definitions *(Manclossi, 2023, p. 2)*, with targets typically refer to (narrow) gender identity, and indicators referring to sex-disaggregated data.

Although 193 UN Member States signed the Agenda, and the wording of the goals suggests a global shift (e.g. Goal 1: End poverty in all its forms **everywhere)**, there is a particular focus on supporting 'developing countries' (e.g. Goal 6.a: expand international cooperation and capacity-building support to developing countries). This negates attention to 'developed' countries. In 2020 the UK released a survey with indicators measuring 6.5.1 (water resources management), this included a target on gender integration "2.2.d: *Gender included in laws/plans or similar within water resources management" (IWRM, 2020).* However, the result for this section is labelled 'n/a', and states *"this is not specifically addressed in the UK, but broader laws and duties mean there is gender parity. In the UK gender-related objectives will be addressed and achieved through general laws and duties, not through gender-specific WRM policies. Established UK equalities law protects all groups in society." (IWRM, 2020, .p.9).* Existence of a law does not ensure parity or equality; so-called *developed* countries are therefore intentionally choosing which targets are applicable dependant on existing assumed practices instead of new monitoring that *developing* countries face scrutiny over.

Validity of choosing the development sector as a case study

As iterated here, development is flawed. In its history, language, and practice. However, international development agencies are a major funder in some countries, especially low-income countries, and these agencies have a disproportionate impact on policy and on how projects are developed, therefore they cannot be ignored.

In 2023 $1.6 billion USD was reportedly spent across the WASH sector, equating to 5.9% of the total reported humanitarian aid funding in 2023 *(Financial Tracking Service, 2023)*. Evidence shows that WASH aid can be a source of increased health-related outcomes; "*households located near WASH aid projects were significantly more likely to report using improved sources of drinking water and sanitation and experienced lower rates of water-related illness" (Wayland, 2019, p.140)*. In a follow-up study assessing 125 countries' foreign aid effectiveness over 20 years, WASH aid was "*consistently associated with improved health outcomes*" in middle-income countries *(Wayland, 2018, p.44)*, but showed no consistent improvement across low income countries. WASH services alone cannot always lead to an increase in health-related outcomes, *"effectiveness of WASH aid, however, seems to be subject to a range of technical and environmental conditions" (Wayland, 2019, p.155)*. WASH is one section of global health, and it needs to work in conjunction with others to be most effective, "*effective policies require an intersectoral approach that encompasses health, WASH, and other areas, such as urban and rural development, and the environment*" *(Heller, 2022)*.

2.2 CONNECTED CONCEPTS

Framing Gender Equality within WASH and Development

Historically, professions responsible for the design of WASH facilities (engineers, city planners, government officials etc) were male dominated, and consequently the needs of others were not a focus, specifically in regards to toilets *(Anthony and Dufresne, 2007; Greed, 2019)*. Up until the late 1700s, gender-segregated public bathroom facilities had not been recorded in existence; they were built by men, for men, regardless of the fact public toilets were a key component of public health *(Greed, 2019)*. This conscious sexism in the design of sanitation services resulted in the typical body being designed for being cisgender and male. This explains why gender is repeatedly seen to be an 'add-on'; in facilities designed for cisgender male bodies, social and biological needs of others are excluded *(Greed, 2019)*.

The narrative around inclusion and recognition of gender as a key factor in WASH decision making has gained recognition due to changing international norms caused by rising waves of feminism, which has in turn influenced international policy and targets. The nineteen seventies saw the rise of the 'Women In development' movement, then 'Women and development' came into play in the late seventies, with 'Gender and development' coming to the forefront in the eighties *(van Eerdewijk and Davids, 2014)*. These varying schools of thought looked at how harmful gender stereotypes lead to inequality, and in turn denied access to male privileges. Initially focusing on women, and then theoretically opening up to a wider definition of those harmed by patriarchal decision making. From this, the concept of gender mainstreaming was created.

Gender mainstreaming is about integrating different experiences by diverse genders throughout the development agenda. It intends to address unequal institutional structures and societies, by inclusion of gender perspectives in policy planning.

In certain manifestations of gender mainstreaming, it is possible that it may remove focus away from marginalised groups, through deprioritisation of gender specific groups *(Mannell, 2012)*, however, the key driving message is *"to ensure that the realization of gender equality is an integral dimension of all development programmes and policy-making processes" (van Eerdewijk and Davids, 2014, p.304).*

In 1995, The Beijing Declaration and platform for action was one of the first United Nations declarations which actively sought to address gender imbalances globally through a call for women equally participating in policy-making (with stipulated quotas), alongside the promotion of gender mainstreaming *(United Nations, 1995)*. This global framework was signed by 189 countries, and states that each actor would seek to address and commit to 36 targets, including (but not limited to):

- *Acknowledging the voices of all women everywhere;*
- *Ensure the full implementation of the human rights of women;*
- *The empowerment and advancement of women, … thereby guaranteeing them the possibility of realizing their full potential in society;*
- *Equal rights, opportunities, and access to resources;*
- *Prevent and eliminate all forms of violence against women and girls;*

Taken from the Beijing Declaration and platform for action (United Nations, 1995)

Although there is clear progress in terms of identifying gender gaps, and areas of concern for monitoring, 'gender' in almost every instance refers to women as opposed to holistically covering gender.

Menstruation: Language and Experience

A critical component of WASH provision is menstruation. Hundreds of millions of people menstruate every day, however, it is not solely women and girls that should be accounted for when discussing menstruation. Globally there is a lack of recognition for Transgender men, non-binary persons and genders outside cisgender women that menstruate *(Babbar et al., 2023).*

It is worth noting there is discord within terminology around menstruation. Some people prefer "*women, adolescent girls and people who menstruate*" *(Babbar et al., 2023, p.1)* insinuating using 'menstruators' reduces people to their bodily functions. This thinking can be driven by the fear that acknowledging multiple genders ability to menstruate would erase women and

attack womanhood. This can be influenced by "*lack of understanding and, more than anything else, a reflexive fear of losing one's identity*" *(Gonsalves, 2020)*. Menstruation can result in dysphoria for gender diverse persons *(Kosher et al., 2023)*, with gender norms reinforcing links between femininity and menstruation, as depicted in the "*gendered nature of menstrual discourse*" *(Frank, 2020, p.9)*. Menstruation does not signify femininity, as the absence of menstruation does not nullify femininity. The degendering of menstruation prevents LGBTQ+ persons being 'othered' *(Rydström, 2020)*, and ensures women are not reduced to biological function.

This research recognises the need for people to be able to self-identify with terminology that they accept, when continuing 'menstruator' will be used unless quoting direct policy and individual anecdotal evidence.

Gendered Components of and access to WASH

WASH facilities need to be built with users in mind; different people require different services. When the different needs of different bodies are not considered, the result is inappropriate facilities lacking critical services and fixtures, which directly negatively affect well-being and autonomy.

Historically 'gender equality' has been synonymous with women and girls in the mainstream, isolating and negating other input. Simplified and stereotypical gendered facilities fail to account for diverse needs. If in a public space all that exists is men's bathroom with urinals, and a women's toilet with baby changing and menstrual health provision, where do the menstruators go that don't want to enter the women's bathroom, what about those that aren't women who have children? Imposing assumptions on gender roles and needs isolates those who do not fit in societies standard binary box. Gender considerations should involve understanding of what people need without assumptions of cis-centric and heteronormative positions.

The move towards inclusive gender practices, in particular reference to increasing gender diversity has caused transphobic voices to steer discussions globally. In 2016 the US caused global public outrage with the passing of the Public Facilities Privacy & Security Act (commonly referred to as the Bathroom Bill, or HB2) which determined someone's public bathroom rights based on their sex assigned at birth. The Bill sought to enforce a biological binary that "*oppresses, subjugates and marginalises Transgender people*" *(Patel, 2023, p.43)*, excluding Transgender individuals from their preferred bathrooms, creating negative impacts on physical and mental health *(Bagagli et al., 2021)*. The bill caused a series of rallies, demonstrations and protests upon first publication *(McKirdy, 2016)*, and continues to shape the US bathroom landscape, with recent protests criticising Senate Bill 180 which restricts Transgender freedoms *(Mipro, 2023)*.

> *"Whether naive, ignorant or explicitly transphobic – trans-exclusionary positions do little to improve toilet access for the majority, instead putting trans people, and others with visible markers of gender difference, at a greater risk of violence, and participating in the dangerous homogenisation of womanhood" (Jones and Slater, 2020, p.834)*

The regressive legislation leads to sex-identity discrimination *(Davis, 2018)*. Discrimination based on appearance (do people in a women's bathroom *'look'* like women) is destructive and harms cisgender and Transgender individuals alike through stereotyping norms. This restrictive binary labelling reduces access to public spaces through government dictation of where femininity, masculinity and androgenicity should exist *(Davis, 2018)*.

Misinformation around use of bathrooms continues to spread, with partial discourse insinuating that allowing Transgender individuals to use their preferred bathrooms would increase cisgender violence, especially fringing on cisgender women's rights and protections *(McGuire et al., 2022)*. Concerns around male predators in women' bathrooms continually circulate to promote the need for Transgender separation, yet this rhetoric is transphobic in nature *(Swales, 2018)*: cisgender men pretending to be women in order to violate public spaces are not Transgender women.

These views stem from gender-critical, Transgender-exclusionary or trans-hostile feminists, who may be a minority, but still hold *"a high level of social, cultural and economic capital" (Hines, 2019, p.154).* The idea that all Transgender women are in fact dangers to cisgender women is not only inaccurate, but harmful, *"'violent misgendering enables trans women to be positioned as imposters' within feminist or women-only contexts and 'as perpetrators rather than victims of male violence'"(Ahmed, 2016, p. 25, in Jones and Slater, 2020)*. The transphobic views that would seek to exclude Transgender women from women's spaces are not evidenced by research:

> *"The passage of such laws is not related to the number or frequency of criminal incidents in these spaces. Additionally, the study finds that reports of privacy and safety violations in public restrooms, locker rooms, and changing rooms are exceedingly rare. …Fears of increased safety and privacy violations as a result of non-discrimination laws are not empirically grounded." (Hasenbush et al., 2019, p.70)*

In a study of 1035 user comments gauging consensus on public opinions around safety and privacy women's spaces, it was revealed that cisgender men hold greater negative positions than cisgender women, due to inability to comprehend the validity of Transgender women's identities.

> *"(a) Cisgender females are around 4x as likely as cisgender males to assert that Transgender women do not directly cause their safety and privacy concerns,*

typically emphasizing their concerns are about 'perverts' posing as Transgender females

(b) Cisgender males are around 1.59 as likely as cisgender females to assert that Transgender females directly cause their safety and privacy concerns.

We theorize that the heightened concern seen in males in these comments stems from them being more likely to view Transgender females not as females, but as males who are lying or mistaken about their gender, and consequently they view themselves as protecting females from these males intruding into private, female-only spaces." (Stones, 2017, p.275).

The conversation around fear has led to toilets being *"weaponised to restrict the freedom of trans people" (Jones and Slater, 2020, p.841).* This thesis does not intend to state gender neutral facilities are the only inclusive choice for sanitation, it simply presents them as an inclusive option for some people that are excluded by mainstream binary options. There are many different examples of gender-neutral bathrooms, some with individual cubicles but shared sinks, others as complete facilities with all amenities in one individual lockable space. Personal preference to choose women's bathrooms over gender neutral bathrooms is valid for a number of reasons (for example ensuring men aren't sharing the space when women perform Wudhu (ritual washing)), but religious freedoms and personal choice in general should not be grounds to discriminate against others *(London and Siddiqi, 2019).*

Use of Gender Guidelines in WASH

Guidelines are one form of tool that can be used to increase attention to the need for gender inclusion. Over the past decades tens of documents have been released across international and national development agencies, research institutions and governments. These documents act as guides on how to theoretically ensure gender mainstreaming is implemented into their own WASH projects.

Table 3 summarises recent guidance on gender and WASH from both governments and development agencies. This table does not provide a comprehensive list of all gender guidance documents for WASH, but serves to demonstrate the types of thematic areas present, and the way information is displayed. The documents were identified through searching the first 10 pages of google results, searching for "WASH / water / sanitation / menstrual health" AND "gender / women / girl" AND "guide / guidance / guidelines / tool / checklist / manual / handbook", and all documents deemed relevant (NGO/INGO/Government produced guides for WASH with an emphasis on gender) were included for table 3.

Table 3 - Overview of Internationally Recognised WASH Guidance documents with a focus on Gender Sensitivity

AusAid	*2000*	Gender guidelines: Water supply and sanitation: Supplement to the guide to gender and development	WASH
The Ministry of Water Resources Ethiopia	*2001*	Gender Mainstreaming Guidelines and Checklists for the Water Sector	WASH
ADB	*2002*	Gender checklist: Water supply and sanitation	WASH
SNV & PROTOS	*2007*	Mainstreaming gender into Water, Sanitation and Hygiene (WASH) programmes: A Training Manual for Water Professionals	WASH
AfDB	*2009*	Checklist for gender mainstreaming in the water and sanitation sector	WASH
WSP	*2010*	Mainstreaming gender in water and sanitation. Water and Sanitation Program Working Paper	WASH
Oxfam	- *(post 2010)*	Ideas that work: preventing violence against women through water and sanitation interventions in early emergency response	WASH
CARE Australia	- *(post 2011)*	Gender Equality Programming - Guidance Note: WASH	WASH
CARE International	*2013*	WASH Gender Marker Tip Sheet	WASH
Plan International Australia	*2014*	Gender and WASH Monitoring Tool	WASH
Save The Children	*2015*	Menstrual Hygiene Management: Operational Guidelines	Menstrual Health
The Gender and Protection Cluster	- *(post 2015)*	Gender and Protection Checklist: WASH	WASH
Sommer, M., Schmitt, M., Clatworthy, D	*2017*	A toolkit for integrating Menstrual hygiene Management (mhm) into Humanitarian response: The Full Guide	Menstrual Health
UNICEF	*2017*	Gender-responsive water, sanitation and hygiene: Key elements for effective WASH programming	WASH
IASC	*2018*	The gender handbook for humanitarian action	Humanitarian Aid
IASC	*2018*	WASH Tip Sheet	WASH
WaterAid	*2018*	Female-friendly public and community toilets: a guide for planners and decision makers	WASH
Water Aid (Australia)	*2020*	Practical guidance to address gender equality while strengthening water, sanitation and hygiene systems	WASH
World Vision	*2023*	Integrating Gender Equality and Social Inclusion in Water, Sanitation and Hygiene, GESI and WASH - A Reference Guide	WASH

All 19 of the documents describe how to carry out a gender analysis in terms of a needs assessment, and therefore describe how to identify gendered issues in a certain community in order to design 'gender friendly' WASH projects. However, the main theme of these documents is to help practitioners understand how to find issues, and rarely talk about option or solutions, or give example of highlighted problems. Of the 19 documents, less than half (9) highlighted suggestions for improving WASH facilities or indicators needing to be monitored to address inclusivity *(CARE Australia, No Date; Oxfam, no date; Save The Children, 2015; The Gender and Protection Cluster, No Date; Sommer et al., 2017; Tsetse and Alleman, 2017; Inter-Agency Standing Committee, 2018a; WaterAid, 2018; World Vision, 2023)*, and of these only the WaterAid *(2018)*, Sommer et al *(2017)*, and Save the Children *(2015)* guidelines provided multiple tangible suggestions as opposed to a few suggestions scattered through the guide. Therefore 10 of the documents specified had no suggestions on how to ensure gender was facilitated into

programmes, only that it should be, and how to find out what the issues are *(AusAid, 2000; The Ministry of Water Resources Ethiopia, 2001; Asian Development Bank, 2002; SNV and PROTOS, 2007; African Development Bank, 2009a; WSP, 2010; Care International, 2013; Plan International Australia, 2014; Inter-Agency Standing Committee, 2018b; WaterAid, 2020).*

Part of reason behind not incorporating specific suggestions for increased inclusive design is so that documents can work across contexts. When guidance is too vague, it is not accomplishing its purpose, as it is not helping people make choices relating to including gender in design; generalisable information can lead to unexpected cultural miscommunication in practice. Questions therefore arise around the subject of what constitutes 'good guidance'; what type of guidance is most successful at achieving its aim, what level of detail provides sufficient information and what external factors need to be considered when attempting to implement the suggestions raised in the documents?

The existence of these documents alone has not led to a dramatic increase in the consideration of gendered needs. Guidance itself by nature is non-mandatory, therefore suggestions raised in these documents are often not seen as 'essential' and 'mandatory' needs – still perpetrating the idea that gender is an additional consideration, not a main consideration. Because of this, there is then often a choice needing to be made; choose between facilities that hit minimum requirements, or choose to incorporate gender 'add-ons'. The driving issue here is that gender is seen as an 'optional add-on', and something is chosen to be incorporated as opposed to something mandatory that would be implicit in standards.

Measuring gendered Outcomes in WASH

Despite global awareness of the need for gender equality, WASH interventions primarily focus on health outcomes, and social outcomes such as gender equality and social inclusion (GESI) are disregarded *(Macura et al., 2023)*; in Macura et al's 2023 study of 463 wash interventions, 78% lacked GESI mainstreaming in program design, and 58% failed to measure GESI outcomes.

One reason for this is the difficulty in measuring social attributes that are inherently individually perceived, in comparison to physical attributes that are tangible. Conceptual models such as SanQol address this theory gap; SanQol 5 Index (sanitation-related quality of life) was developed to document subjective perceptions of disgust, disease, privacy, shame and safety in relation to sanitation facilities *(Ross et al., 2021)*. Additionally qualitative analysis of implementation methods exist such as "Outcome Mapping" *(Earl et al., 2001)* and the "Most Significant Change Technique" *(Dart and Davies, 2003)*, which offer pathways to measure social change.

Gender-sensitive frameworks can also be used to assess gender inclusion levels WASH programs. These include WASH-GEM (water, sanitation and hygiene gender equality measure) *(Carrard et al., 2022)*, and the Adapted gender-integration framework (MacArthur et al., 2023) each serving as a useful tool to evaluate projects on their level of inclusion.

3 CHAPTER III

GLOBAL DISCONNECT BETWEEN INTENTION AND REALITY

3.1 REASONED APPROACH

Gender Equality is a human right, a guiding principle of leading institutions and organisations, historically a Millennium Development Goal, and now a Sustainable Development Goal. The principle leads to the curation of gender mainstreaming policies, guidance documents and strategic action plans *(e.g. African Development Bank, 2009b; Asian Development Bank, 2002; UNICEF, 2013c; UNICEF, 2017a; The World Bank, 2016; World Bank, 2001; World Bank Group, 2015; WaterAid, 2018).* Globally there is an agreed consensus that gender equality is a principle that is needing to be strived for, especially in water and sanitation, however evidence suggests that countless facilities globally are designed without gender considerations in mind.

Academic studies have previously focused on the gender equality outcomes, principles and indicators, at the program level *(e.g. Caruso et al., 2021; Dery, F. et al., 2020; MacArthur et al., 2020; Pouramin et al., 2020; Leahy et al., 2017).* This chapter addresses gender-based practices in WASH programs of leading organisations; how does the public strive for gender equality correspond to the practices present in water, sanitation and hygiene programming?

The World Bank and UNICEF were chosen for this analysis due to the two being multi-lateral international organisations theoretically leading the sector (The World Bank as the largest funder of infrastructure, and UNICEF as the leader of the global WASH Cluster). The adapted 'Gender-Integration Framework' *(MacArthur et al., 2023)* was used to classify 385 practices across 55 evaluations, and concludes that over 50% of these practices are categorised as 'gender insensitive'.

This chapter provides evidence that awareness is the first step towards gender equality, but that intention does not lead to increased outcomes relating to gender without the appropriate and associated accountability mechanisms. A systematic cross-agency assessment of gender incorporation in WASH development agency investments provides a valuable and novel

evaluation of development agency performance to highlight the extent to which gender is included and incorporated in project reality.

Published Journal Article

Gender inclusion in Water, Sanitation and Hygiene (WASH): Intention versus Reality

Hannah Jayne Robinson | University of Leeds, UK | Corresponding author.

Dani Barrington | The University of Western Australia, Australia.

Barbara Evans, Paul Hutchings, Lata Narayanaswamy | University of Leeds, UK.

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The configuration of the paper has been edited to ensure the formatting aligns with the thesis, however the content remains identical. Where table/figure/appendices have been changed, they are presented as [table x], to show they have been edited.

Relating annexes are available at the end of the thesis: Consent Request (Appendix A.1), Participant Information (Appendix B.1), Survey Questions (Appendix D.1), Recruitment Material (Appendix E.1).

An exact copy of the journal article is presented in Annex G (Robinson et al., 2024).

3.2 ABSTRACT

Motivation: Gender equality is inherently bound with Water, Sanitation and Hygiene (WASH) provision, access, and use. Gender shapes experiences of projects and services, from participation in design to ensuring access to appropriate facilities. Many observers call for active attention to gender throughout the project cycle, but there is little evidence of the extent to which this happens in practice.

Purpose: The article examines the extent to which evaluations of WASH implementation identify good gender-inclusive practices. It explores the reasons for failings and suggests ways gender equality could be more actively considered and effected in WASH programming.

Methods and Approach: Textual analysis was undertaken on World Bank and UNICEF project evaluation documents to identify how gendered elements were addressed. Practices

were then categorized according to a Gender Sensitivity Framework, rating them on a sliding scale measure from "gender insensitive" to "transformative." The perceived barriers to gendered programming were subsequently triangulated using a mixed methods survey of WASH practitioners which used self-identified challenges to assess consensus moderation to triangulate perceived barriers to gendered programming.

Findings: Lack of clarity in conceptualizing gender results in poorly defined targets that are often insufficiently context specific. Consequently, project objectives are either reductionist, limiting progress on "gender" to easily quantifiable measures that fail to capture the varied lived realities of gendered experiences, or comprise vague qualitative statements that cannot be accurately assessed, leaving gender inclusion unaddressed.

Policy implications: Gender is a social construct that is shaped by culture. Context-specific understanding would support more nuanced gender-inclusion objectives that could be monitored while also correlating with people's lived realities. Regular evaluation of gender guidance would ensure organizations' understanding and conceptualization of gender reflects the fluidity of society. Policy and practice interventions that guarantee the active involvement of multiple stakeholders and diverse voices would ensure that implementation is effective and evaluation is more accurate.

Keywords: development, gender, implementation, sanitation, WASH

3.3 INTRODUCTION

Gender equality is a key concern for Water, Sanitation, and Hygiene (WASH); the burden of vulnerability is tied to gender identity. This is most commonly articulated as the specific needs of women and girls. Women are typically responsible for water management (O'Reilly & Dreibelbis, 2018; Graham et al., 2016) and can have additional requirements for WASH services (including but not limited to, menstruation, pregnancy, menopause, and caring responsibilities). These, in turn, create additional potential WASH-related insecurities (Caruso et al., 2017).

Insecurities can be caused by an individual's different needs. Clearly, not all women have the same needs, and similarly nor do all men, all Transgender persons, or people of any other identity (Boyce et al., 2018). Both biological and social requirements must be addressed to acknowledge the diverse range of experiences of different genders to achieve gender equality in WASH. Within WASH there is a tendency for gender equality to focus specifically on adolescent girls *(MacArthur et al., 2020)*, and when the focus falls on men and boys it is usually as champions of women's empowerment *(Slegh et al., 2013)*, rather than addressing their own specific needs. There is a justification for making women and girls a key focus of gender

equality since historical injustices often place substantial additional burdens on them, but the singular and unidirectional focus may result in a failure to address gender equality broadly. This focus on women and girls often ignores explorations of injustices such as gendered power and the way that it manifests for everyone. This article addresses the application of gender equality broadly, while paying attention to the impact of "gender" often being conflated with "women and girls" in guidelines, policies, and targets.

Multiple terms are often used when discussing gender, so the distinction among them at a definitional level should be understood. Gender equality aims for equal treatment and equal access to services, whereas gender equity goes further, seeking to understand the barriers preventing equality to provide additional structures for those with unequal opportunities. Furthermore, the level at which a project interacts with gender equality and equity can be categorized according to its sensitivity level (insensitive, sensitive, responsive, or transformational), as seen in the Adapted Gender-Integration Framework *(MacArthur et al., 2023)*. Gender equality is a key target to ensure basic inclusion, it is the term most commonly used in the context of international development and is a component of the framework used for analysis in this research, and is thus used as a base term in this article.

International aid is a dominant characteristic of the WASH sector. In the context of international development, many countries depend on foreign aid to implement infrastructure projects, with USD 796 million in humanitarian funding reported by the WASH sector in 2021 *(Financial Tracking Service, 2022)*. In the development sector, "gender" is often seen as binary. Imposing this narrative fails to recognize societies and people that exist outside this typical designation of cis-gender men and women, such as Transgender, two-spirit, third gender, and non-binary. The oversimplification of gender has arisen from the global architecture both now and historically; a colonial legacy with existing negative impacts that imposes external beliefs and assumptions *(Gan, 2017)*. Without the ability to factor this into WASH projects, people of all genders are at risk of discrimination and exclusion from WASH services.

Challenging ideas of defining equality have resulted in frameworks such as Gender Equality and Social Inclusion (GESI) (GESI Working Group, 2017) and the Water, Sanitation, and Hygiene Gender Equality Measure (WASH-GEM) *(Carrard et al., 2022)*. The frameworks demonstrate the need for interconnected thinking to advance equality. This will only work, however, if it is understood which technical and social challenges pose a threat to equality and what tools are effective at challenging the barriers.

It is evident that there is a need to achieve gender equality to make additional progress in WASH. Recent systematic reviews of interventions with GESI outcomes of projects carried out between 2010 and 2020 showed that only 22% of the studies involved interventions that "included GESI mainstreaming components" *(Macura et al., 2023, p.6)*. Academic analysis of

gender equality principles, language, and indicators have also been conducted *(Caruso et al., 2021; Dery, F. et al., 2020; MacArthur et al., 2020; Pouramin et al., 2020; Leahy et al., 2017)*; these highlight the inequalities that persist across WASH.

Using textual analysis, this article explores the language used in World Bank and UNICEF WASH-intervention evaluations to identify how, where, and whether gendered elements have been addressed. The organizations were chosen as they are two major WASH funders, with a relatively high level of influence on national policy and both had gender equality strategies in place for the period studied.

These evaluations detail projects that were implemented when there was an allegedly strong focus on integrating gender within development projects. The World Bank's gender-mainstreaming policies have been in place since 2001 *(World Bank, 2001)*, with the current gender equality strategy extending into 2023 *(World Bank Group, 2015)*. UNICEF has had a series of gender policies over the last few decades, with strategic action plans detailing gender equality measures in place over 2014–2017 *(UNICEF, 2013c)* and again 2018–2021 *(UNICEF, 2017c)*. Evaluations from this period should therefore reflect the gender guidelines and strategies present.

Although the strategies typically focus on binary notions of gender, they do include clear guidance that projects should: "monitor the gender disaggregated impact of the operation" *(World Bank, 2001, p.33)*; move toward "a more strategic approach to mainstreaming to help achieve results on the ground" *(World Bank Group, 2015, p.29)*; and "promote gender-sensitive interventions as a core programmatic priority" *(UNICEF, 2013c, p.10)*. The focus of their gender priorities tends to have been narrow and economically motivated, as is often seen in international development implementation *(MacArthur et al., 2020)*. However, it is evident that during this period there has been an awareness of inclusion at an organizational level.

By systematically reviewing these two multilateral organizations, this article demonstrates how the public appearance of striving for gender equality and actual project execution, often differ. The evaluations were then categorized against the Adapted Gender-Integration Framework *(MacArthur et al., 2023)* to classify the gender outcomes. The article also uses survey data that collected the experiences of individuals working on gender and WASH to understand personal experiences of theoretical and practical gender inclusion. Using consensus moderation, this survey triangulates the researcher-identified challenges with independent practitioners.

It is important at this point to offer a disclaimer or clarification. The analysis addresses the gender equality outcomes and intentions of project evaluations; it does not seek to judge the entire project solely based on the gender attributes present. Furthermore, this research is an analysis of the two largest organizations working in WASH. Outside the scope of the review lie many projects funded by non-governmental organizations (NGOs), governments, and

donors that may well address gender equality differently, and potentially more radically. The findings of this review may not therefore be applicable across all implementing agencies, but this work addresses the current lack of evidence depicting the reality of gender equality implementation outcomes.

The article is structured as follows. Section 2 describes the methods used, followed by the results of the review of published evaluations of UNICEF and World Bank WASH projects, and Section 3 follows with a survey of a range of people knowledgeable about the sector. The issues raised by the findings are discussed in Section 4, and Section 5 concludes.

3.4 METHODS

3.4.1 Exploration of internal evaluations

Two major influencers in WASH are the World Bank and UNICEF. The first, a key source of assistance in financing large WASH infrastructure projects globally *(The World Bank, 2020)*, and the second, an influential actor in humanitarian WASH via its leadership of the Global WASH Cluster, co-ordinating capacity strengthening at global and national levels for WASH crisis, focusing on community practice, behavioural change and local infrastructure *(UNICEF, 2016)*.

These two multilateral organizations are prominent in WASH, have strong affiliations with the development, measurement, and achievement of the Sustainable Development Goals (SDGs), have their own clear gender programmes and strategies, and publicly strive for gender equality *(UNICEF, 2021a; World Bank Group, 2020b; World Bank, 2001; World Bank Group, 2015; UNICEF, 2016; UNICEF, 2017c)*. These policy documents and guidance notes specify the need for gender to be seen as "fundamental to the whole question of development" *(World Bank, 2001, p.1)*, and something that should be systematically integrated into programming *(UNICEF, 2013c)*. These organizations fund projects designed to influence gender relations and also claim to build gender into all programmes, including WASH. Evidence of this commitment to gender should theoretically be traceable in their projects, which could be expected to include gendered elements and an understanding of how gender can affect implementation.

The focus of the World Bank on infrastructure and of UNICEF on WASH practices and smaller infrastructure allows for multiple ways in which to assess and understand gender outcomes.

The textual analysis focused on "independent" evaluations of World Bank- and UNICEF-supported projects in WASH. UNICEF evaluations are carried out by external agencies, which should theoretically limit internal bias. The World Bank's independent reports are

carried out by the Independent Evaluation Group (IEG). The IEG is an operational department of the World Bank whose staff report directly to the Executive Board; this group is officially independent, but ultimately affiliated to the World Bank.

The document repositories of both organizations were searched in April 2021, and again in August 2022. The review was not restricted geographically or in terms of time (anything uploaded to the evaluation sites was considered); any evaluation of a WASH project available in the repository was considered for inclusion.

The evaluations were screened against four criteria:

- Criterion 1: Not a duplicate, available in English.
- Criterion 2: Final project-level evaluation.
- Criterion 3: Primarily about water supply, sanitation, and/or hygiene.
- Criterion 4: Included instances of gendered terminology.

Final project-level evaluations were chosen both to facilitate comparison between the World Bank and UNICEF documents and to ensure attention was paid to the *actual effects or outputs* from projects rather than simply looking at *intended goals and targets*. Country-level evaluation of strategies, sector analysis, and rapid assessments were excluded from this study, as these tended to be general overviews and lacked the required detail to be able to perform analysis related to specific projects.

At the time of the search, the World Bank had 4,850 publicly accessible independent reports carried out by the IEG, which are reported in Project Performance Assessment Reports (PPARs). There were 2,631 PPARs in total; 30 under the topic of "water," 61 categorized as "sanitation," and four as "hygiene" (these categories are defined by the World Bank and were chosen for investigation as those most relevant to this study).

UNICEF had 2,394 publicly accessible evaluation reports carried out by multiple different external agencies. These were searched using the keywords "water" and "sanitation" to find relevant WASH-related reviews, resulting in 146 (water), 143 (sanitation), and 40 (hygiene) evaluations. Project-level evaluations cannot be specifically identified through the filters available on the website, so this was done manually.

The third criterion for inclusion was that at least one of the main objectives or components of the projects had to specifically refer to water, sanitation or hygiene. [Table 5] shows all project components in the projects included (Capacity Building, Health, Water Resource Management, Conservation, Sanitation, Finance, Sewerage and Solid Waste, and Water Supply) as defined by the organizations.

The final criterion separated papers that include "gendered language" from those with entirely "non-gendered language." This means that the review only included evaluations that

incorporated gendered sections, gendered targets and activities, or at least instances of "gender," "women/woman," and "girl/girls" being used in the evaluations to signify different gendered perspectives or experiences.

3.4.2 Content analysis of evaluations

The documents included were imported into NVivo 12 for analysis *(QSR International Pty Ltd, 2018)*.

The gender-sensitivity level of the evaluations were assessed through the Adapted Gender-Integration Framework *(*Table 1, *MacArthur et al., 2023)*. The framework classifies interventions according to their level of sensitivity from gender insensitive (unaware of gender dynamics), to sensitive (basic awareness and mobilization of women), to responsive (purposeful strive for empowerment), to transformative (transformation of norms and structures).

The evaluations have been assessed on two major themes, Project Design and Language. The first explores the overall project aim and intention, prevalence of gendered targets, and the awareness of gender throughout implementation and design. The second identifies definitions and presentation of gender throughout the evaluation. This explores both the intention of the project and the methods to document and assess gender by the independent organizations.

The framework served as a structure to classify the themes and subthemes, with researchers creating insensitive, sensitive, responsive, and transformative definitions for multiple categories. In addition to the framework categorization, where possible, financial information was also analysed, by breakdown of budgets, with specific reference to proportions attributed to gender aspects of projects. By comparing designated budgets to final actual budgets, it was possible to see how frequently gender budgets were cut, sustained, or increased.

[Table 4] displays the breakdown of categories and the associated gender-sensitivity level.

Although many categories could be assigned a level on the gender-sensitivity framework, a few elements could not. These elements include whether quotas and gender specialists were present (as their inclusion alone does not directly correlate to increased outcomes) and the availability of budget resources specified for gender outcomes. This allowed for the assessment of the language used and the breadth of gender inclusion in the evaluations.

Table 4 - Adapted gender sensitivity framework documenting sensitivity level and categories of analysis (Source: MacArthur et al. (2023))

	Gender Sensitivity	**Gender Insensitive**	**Sensitive**	**Responsive**	**Transformative**
	Category				

Project Design	*Overall Project Aim and Intention*	No explicit consideration of gender, women, or girls in project aims	Project specifies focus on women's and girls' development	Gender equality, equity, or empowerment implied as a specified aim	Active description of the need and considerations that relate to transformative gender equality
	Gendered Targets	No explicit targets that relate to gender, women, or girls	Gender targets relating to women and girls	Gender targets relating to gender equality broadly	Measurable gender targets that relate to transformative equality
	Implementation and Design	No explicit mention of diverse genders being involved in project development	Diverse genders involved in implementation OR design of project	Diverse genders in implementation AND design of project	Diverse genders were involved throughout the whole project cycle
Language	*Definition of Gender*	Project does not define gender	Projects gives basic and traditional definitions of gender	Project details contextually specific definition of gender that empowers participants	Project details contextually specific definition of gender that aims at norm changes
	Gender / Sex	Gender and sex used interchangeably	Gender and sex used separately	Gender and sex defined and used separately	Diverse interpretation of gender that understands a person's needs over a body's needs
	Who does "gender" include actively?	No active consideration of gender throughout project	Only women and girls are discussed in respect to gender throughout	Inclusive language relating to more than just women and girls	Active addressing of gender, and the context-specific manifestations
	Discussions of Gender	Individual isolated statements about gender	Multiple connected statements about gender relations within the project	Gender sections or substantial information detailing challenges and solutions	Gender sections, or substantial information detailing gender challenges, solutions, and harm-prevention strategies

None of the documents included in this analysis contained any indication that gender identities beyond men/women were considered; therefore, when "men" and "women" are specifically referred to in this section, the authors assume the identities relate to cisgender persons.

3.4.3 Consensus moderation across qualitative sample

In order to triangulate and thus enrich the findings from the textual analysis, a 17-question survey was designed to capture personal experiences of gender inclusion and implementation in WASH.

The survey was carried out to achieve consensus moderation across a new sample to assess the wider relevance of the findings. Consensus moderation involves evaluating the views of a panel of informants on a topic (interpreted in this study to mean practitioners working on gender within WASH programmes). It involves assessing the extent to which the panel has consensus on a topic, which in this case was views on how gender is operationalized within WASH programming. Recurrent themes were presented in a mix of closed and open-ended choices to assess individuals' experiences in relation to the identified areas. This provided context and reasoning for pre-existing barriers preventing uptake of gender-sensitive policies. Participants were not exclusively recruited from the World Bank and UNICEF, but nor were employees from these organizations excluded from taking part.

The full question list and response options are available in [Appendix D.1]. The questions cover participants' sector experience and involvement in gender equality and WASH measures, while providing recurring opportunities to add discursive detail to questions asked in the form of optional response boxes.

Participants were recruited through existing networks, both formal (University of Leeds Water Hub and the Gender and Development Network, UK) and informal (LinkedIn, Twitter, and Doctoral College groups), and the survey was free to be shared among colleagues (as evident by shares/retweets across Twitter and LinkedIn). Consensus among participants was reached after the initial distribution, with saturation of answers showing majority agreement to proposed questions; additional sources were therefore not required at this time. The recruitment material is available in [Appendix E.1]. To be eligible, participants needed to have experience working in WASH and gender-related topics.

The survey was tested on a trial group of eight researchers drawn from the University of Leeds, Loughborough University, and Cranfield University to check clarity and user-friendliness.

Respondents' personal information was limited to their job sector and gender. Initial qualitative questions (Q1–4) were used to gauge geography, sector experience, and general feelings toward the concept of gender equality, providing background and reasoning for subsequent discursive additional information. The core questions (Q5–14) were multiple choice questions with optional discursive comment boxes, providing space for respondents to clarify meaning, highlight missing options, or provide context to their responses.

Informed consent was obtained from all participants and participants were able to withdraw from the research at any time . The Online Survey Tool was used to collect password-protected, GDPR-compliant, and ISO 27001 standard certified data. The research was granted ethical approval on April 26, 2022, by the University of Leeds Engineering and Physical Sciences Research Ethics Committee, and closed for responses on July 1, 2022.

3.4.4 Survey analysis

Descriptive statistics were used to identify the level of consistency, using agreement with predetermined statements as the measure. The sample was small and self-selected, and therefore not suitable for quantitative statistical analysis.

The optional qualitative responses were analysed thematically. To identify common concepts and ideas, consistency was explored between respondents and also within answers provided by each individual respondent. Conflicting responses from a single respondent were taken to suggest untrustworthy narrators and repeated elements were taken to suggest issues that respondents felt were significant.

All analysis was performed using NVivo 12 (QSR International, 2018).

3.5 RESULTS

Gender inclusion in international development evaluation reports

The search of World Bank and UNICEF databases produced 55 evaluations which met the criteria for inclusion in the study. The reasons for exclusion are summarized in Figure 1. The included evaluations are summarized in [Table 5].

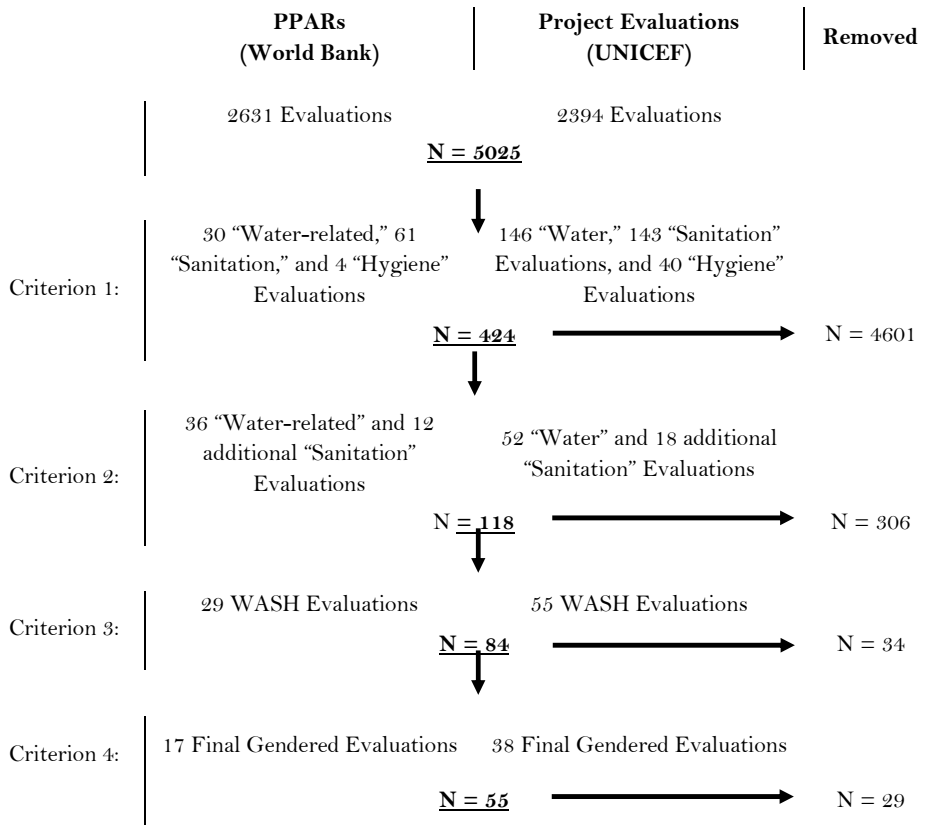


Figure 1 - Inclusion and exclusion flow chart for systematic analysis

Table 5 - Available independent project evaluations for World Bank and UNICEF-supported WASH interventions with gendered elements

Project Themes

CB:	*Capacity Building*	***H:***	*Health*	***WRM:***	*Water Resource Management*	
C:	*Conservation*	***S:***	*Sanitation*			
F:	*Financing*	***SS:***	*Sewerage and Solid Waste*	***WS:***	*Water Supply*	

The World Bank Group – Project Performance Assessment Reports				
1	*(World Bank, 2006a)*	Ghana	Urban Environmental Sanitation Project, Village Infrastructure Project, and Second Community Water and Sanitation Project	S, WS
2	*(World Bank, 2006b)*	Nigeria	National Water Rehabilitation Project, First Multi-State Water Supply Project, and Small Towns Water Supply and Sanitation Pilot Project	S, WS
3	*(World Bank, 2006c)*	Yemen	Land and Water Conservation Project Taiz Water Supply Pilot Project, and Sana'a Water Supply and Sanitation Project	C, S, WS
4	*(World Bank, 2008)*	Nepal	Rural Water Supply and Sanitation Project	S, WS

5	*(World Bank, 2009a)*	Morocco	Lakhdar Watershed Management Pilot Project	WRM, WS
6	*(World Bank, 2009b)*	Republic of the Philippines	Water Districts Development Project	S, SS, WS
7	*(World Bank, 2011a)*	Ecuador and Paraguay	An IEG Comparative Review of Two Rural Water Supply and Sanitation Projects in Latin America and the Caribbean Based on Project Performance Assessments of: Paraguay 4th Rural Water Supply and Sanitation Project and a Rural and Small Towns Water Supply and Sanitation Project in Ecuador	S, WS
8	*(World Bank, 2011b)*	Ecuador	Rural and Small Towns Water Supply and Sanitation Project (Praguas)	S, WS
9	*(World Bank, 2013)*	Republic of India	Kerala Rural Water Supply and Environmental Sanitation Project "Jalanidhi" and Maharashtra Rural Water Supply and Sanitation Project "Jalswarajya"	S, WS
10	*(World Bank, 2015)*	Senegal	Long-Term Water Sector Project and Supporting Access to On-Site Sanitation Services Through Output-Based Aid Scheme	S, WS
11	*(World Bank, 2016a)*	Brazil	Rural Poverty Reduction and Community-Driven Development Lessons from Ceará and Santa Catarina Projects	C, S, WS
12	*(World Bank, 2016b)*	Ghana	Second Urban Environmental Sanitation Project and Small Towns Water Supply and Sanitation Project, Second Phase of APL	S, WS
13	*(World Bank, 2016c)*	Peru	Lima Water Rehabilitation and Management Project and National Rural Water Supply and Sanitation Project	WRM, WS
14	*(World Bank, 2016d)*	Zambia	Water Sector Performance Improvement Project	S, WRM, WS
15	*(World Bank, 2017a)*	Nepal	Second Rural Water Supply and Sanitation Project	S, WS
16	*(World Bank, 2017b)*	Sri Lanka	Second Community Water Supply and Sanitation Project	S, WS
17	(World Bank, 2022)	Vietnam	Results-Based Rural Water Supply and Sanitation Under the National Target Program	F, S, WS

UNICEF – Final Project Evaluations

1	*(UNICEF, 2000)*	Uganda	Primary School Sanitation Research	S
2	*(UNICEF, 2003)*	Bangladesh	Evaluation of Environmental Sanitation, Hygiene and Water Supply in Urban Slums and Fringes Project	S, WS

3	*(UNICEF, 2004a)*	Bangladesh	An Assessment of the School Sanitation and Hygiene Education (SSHE) Strategy	S, WS
4	*(UNICEF, 2004b)*	Malawi	Evaluation of the Strategic Sanitation and Hygiene Promotion -for Schools Pilot Projects Nkhata Bay and Kasungu Districts	CB, S
5	*(UNICEF, 2005a)*	Timor-Leste	An Assessment of Project in Communities and Primary Schools with Recommendations for the Future	CB, S, WS
6	*(UNICEF, 2005b)*	Bangladesh	Environmental sanitation, hygiene and water supply in rural areas of Bangladesh	CB, S, WS
7	*(UNICEF, 2005c)*	Bangladesh	Evaluation of Chittagong Hill Tracts Component of GOB UNICEF Project on Environmental Sanitation, Hygiene and Water Supply in Rural Areas	S, WS
8	*(UNICEF, 2005d)*	Nicaragua	Evaluation of the friendly and healthy schools initiative's school sanitation and hygiene education component	S, SS, WS
9	*(UNICEF, 2005e)*	Kenya	Management of Rural Water Supplies in Mandera, Wajir Garissa (and Isiolo) Districts of North Eastern Province	WRM, WS
10	*(UNICEF, 2005f)*	Zambia	Promotion of water, sanitation and hygiene education in Choma, Namwala, Gwembe and Siavonga districts	H, S, WS
11	*(UNICEF, 2006a)*	Cambodia	Evaluation of the UNICEF supported Seth Koma Water Environment & Sanitation Activities	S, WS
12	*(UNICEF, 2006b)*	Nepal	Participatory Assessment of the School Sanitation and Hygiene Education Programme in Nepal	CB, S, WS
13	*(UNICEF, 2007a)*	Bangladesh	Efficiency and Effectiveness of Point-of-Use Technologies in Emergency Drinking Water: An Evaluation of PUR and Aquatab in Rural Bangladesh	WS
14	*(UNICEF, 2007b)*	Tajikistan	Water and sanitation evaluation report	S, WS
15	*(UNICEF, 2008)*	Bangladesh	Evaluation of the School Sanitation and Hygiene Education (SSHE) project	CB, S, WS
16	*(UNICEF, 2009a)*	Cambodia	Community-Led Total Sanitation (CLTS) in Cambodia	S
17	*(UNICEF, 2009b)*	Ghana	Evaluation of strategy for scaling up Community-Led Total Sanitation in Ghana	S
18	*(UNICEF, 2009c)*	Vietnam	Evaluation report on the water safety model in Thừa Thiên Huế	WRM, WS
19	*(UNICEF, 2009d)*	Nepal	Final Evaluation of the Hygiene Improvement Project: Hand Washing with Soap and Point-of-Use Water Treatment Initiative	H, S

20	*(UNICEF, 2009e)*	Ghana	Second Performance Monitoring Mission: an integrated Approach to Guinea Worm Eradication through Water Supply, Sanitation and Hygiene in the Northern Region of Ghana	CB, S, WS
21	*(UNICEF, 2010a)*	Republic of Mozambique	Final Evaluation of EU Water Facility WASH Programme in 4 districts and 4 Municipalities	S, WS
22	*(UNICEF, 2010b)*	Egypt	Final Report for the assessment of Revolving Funds Program to improve hygiene and sanitation practice program	F, S, WS
23	*(UNICEF, 2011a)*	Zimbabwe	ACP EU Water Facility Project - 2006-2011: Addressing water and sanitation needs of the rural poor in the context of HIV and AIDS in Zimbabwe	CB, S, WS
24	*(UNICEF, 2011b)*	Cambodia	Evaluation of WASH program 2006-10	CB, S, WS
25	*(UNICEF, 2012)*	Ghana	Evaluation of the Government of Ghana - UNICEF Integrated Approach to Guinea Worm Eradication through Water Supply, Sanitation and Hygiene in Northern Region, Ghana (I-WASH)	H, S, WS
26	*(UNICEF, 2013a)*	Bosnia and Herzegovina	Final evaluation of the UN MDG Achievement Fund-sponsored "Securing Access to Water through Institutional Development and Infrastructure" joint UNDP and UNICEF project in Bosnia and Herzegovina	WS
27	*(UNICEF, 2013b)*	Liberia	Managing the transition between emergency WASH & development agenda: An evaluation of ECHO-funded Water, Sanitation and Hygiene (urban WASH- II) project in Monrovia, Liberia	CB, S, WS
28	*(UNICEF, 2014)*	Suriname	Increasing access to water, sanitation, and hygiene in Suriname's rural interior	CB, S, WS
29	*(UNICEF, 2015a)*	Timor-Leste	End of Project Evaluation of Project 'Improving Access to Water, Sanitation and Hygiene (WASH) in Rural Schools and Communities through Capacity Development"	CB, S, WS
30	*(UNICEF, 2015b)*	Mali	Final Report: Impact evaluation of community-led total sanitation (CLTS) in rural Mali	S
31	*(UNICEF, 2015c)*	Ethiopia	Report on Evaluation of WASH - Joint Action Plan (JAP) implementation in eight water insecure Woredas in Afar Regional state	S
32	*(UNICEF, 2017b)*	Solomon Islands	Final Evaluation Improving WASH in Solomon Islands (IWASH-SI) Project	CB, S, WS
33	*(UNICEF, 2018a)*	Republic of Mozambique	Final evaluation of the project: "Rehabilitation of two piped water systems in Mozambique"	S, WRM, WS

34	*(UNICEF, 2019a)*	Zimbabwe	End-of-project evaluation for a water sanitation and hygiene project in satellite schools	S, WS
35	*(UNICEF, 2019b)*	Malawi	Evaluation of the Community Led Total Sanitation and Hygiene Programme in Malawi	S
36	*(UNICEF, 2019c)*	Zimbabwe	An Evaluation of the Small Towns WASH Programme (STWP) in Zimbabwe (2012-2018)	H, S, WS
37	*(UNICEF, 2019d)*	Somalia	Final evaluation of "Improving children's access to water and sanitation in Somalia (2015-2018)"	H, S, WS
38	*(UNICEF, 2020)*	Ghana	Summative Evaluation of the Enhanced and Accelerated WASH Programmes in Ghana. Enhanced Programme Evaluation – Final Report (March 2012 to December 2018)	CB, S, WS

The scope of this study encompassed every available evaluation that included at least one instance of gendered terminology ("gender," "women/woman," and "girl/girls"). Both organizations have apparent gender strategies, though only 55 (65%) of the evaluations met the criteria to be included in this analysis (out of 84 WASH-based final project evaluations) demonstrating, at least at a surface level, a lack of attention paid to gender.

3.5.1 Gender inclusion in international development evaluation reports

This section presents the evaluation of using the Gender Sensitivity Framework *(MacArthur et al., 2023)*. The overall results are shown in Figure 2.

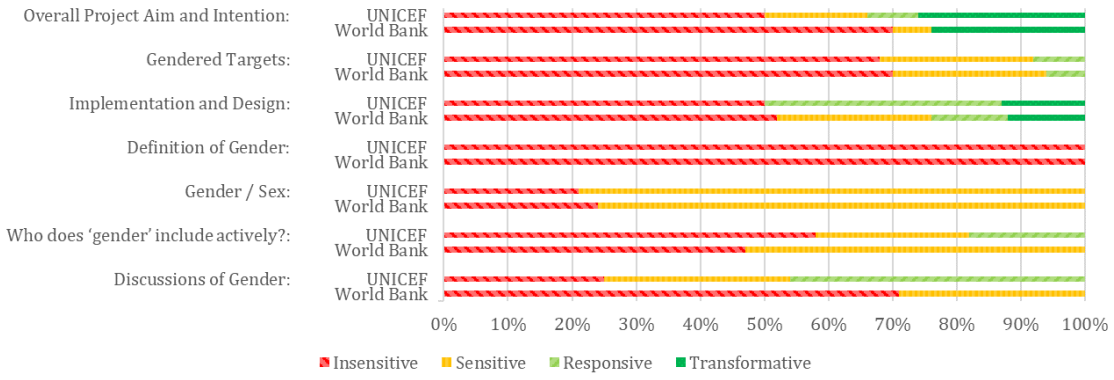


Figure 2 - Prevalence of Gender Sensitivity across study in relation to Adapted Gender Sensitivity Framework (MacArthur et al., 2023)

Overall project aim and intention

Transformative project aims were present in 26% of UNICEF evaluations and 24% of World Bank evaluations ; clearly showing an understanding of the need and reasoning for gendered elements (UNICEF, 2004a, 2004b, 2005b, 2005c, 2006a, 2006b, 2010a, 2010b, 2019b, 2020;

World Bank, 2008, 2009a, 2015, 2017a). The reasons for considering gender were stated as: difference in biological needs (UNICEF, 2004a, 2006b) and the differences in societal standing and gender roles (UNICEF, 2004b, 2005b, 2005c, 2010b, 2019b, 2020; World Bank, 2009a), notably including that "projects need to take gender patterns of work into account" (World Bank, 2009a, p. x). Responsive programmes aims highlighted that gender equality was an important concern and overall project aim (UNICEF, 2011b, 2013a, 2020)(8%), and sensitive aims indicated a focus on the development of women and girls, but did not explicitly state the importance of gender equality (UNICEF, 2005a, 2005c, 2005e, 2010b, 2019a, 2019c, 2019d)(16%) (World Bank, 2017a)(6%). The remaining 70% of World Bank Projects and 50% of UNICEF projects were classified as insensitive due to their lack of attention to gender.

3.5.2 Gendered targets

No explicit instances of measurable targets relating to transformative gender equality were present, meaning that no transformative objectives were seen across the sample. Gender-responsive objectives considering multiple genders were present across 7% of projects (UNICEF, 2004b, 2019c, 2020)(8%) (World Bank, 2017a)(6%)), and considered outcomes relative to multiple genders, "to develop gender-sensitive school sanitation" (UNICEF, 2004b, p. 5). However, "multiple genders" in this instance refers to projects that did not focus solely on cisgender women, but also included men; no projects included diverse genders.

Gender-sensitive objectives specifically highlighted women and girls (UNICEF, 2004a, 2005a, 2005b, 2005f, 2006a, 2007b, 2009a, 2010b, 2011b; World Bank, 2006b, 2008, 2011a, 2013). However, the language and wording of these were vague and, in no case, sufficiently specific to support measurement. Examples included the requirement to meet the "needs of adolescent girls" (UNICEF, 2004a, p. iii) or to "reduce water-carrying burdens for girls and women" (UNICEF, 2005f); none had explicit measurable targets.

Implementation and design

Transformative projects considered gender throughout the project cycle (design, implementation, use, and maintenance); this strategy was rarely evident in projects (UNICEF, 2005b, 2007b, 2019a, 2019d, 2020)(13%) (World Bank, 2008, 2017a)(12%)).

Projects that involved diverse genders during design and implementation were categorized as gender responsive (UNICEF, 2004a, 2004b, 2005a, 2005c, 2005d, 2006b, 2009d, 2009e, 2011a, 2011b, 2013a, 2019c, 2019d, 2020; World Bank, 2009a, 2017a), and projects with only one inclusion component (all of which happen to be involved in implementation only) were categorized as gender sensitive (World Bank, 2006a, 2013, 2016b, 2016c). In all instances,

diverse genders in these documents related solely to cisgender men and women, with language referring to the inclusion of "both genders" (UNICEF, 2004a, p. xvii), highlighting a lack of awareness and inclusion of true gender diversity.

Definition of gender

Although "gender" is a holistic concept, when used in development contexts it often refers solely to the binary ideas of men and women, even in cultures and societies that recognize that gender is more fluid. These documents were no exception; none of the project evaluations included a definition of gender; thus, all were specified as gender insensitive for this category.

Gender/sex

The language used throughout the documents was inconsistent, with gender and sex often being used interchangeably (UNICEF, 2000, 2004a, 2005d, 2006a, 2007a, 2008, 2009a, 2015a; World Bank, 2009a, 2016b, 2017a, 2017b), which is gender insensitive. Most projects (78%) used language more purposefully and consistently without continuous interchanges; these were designated as gender sensitive. As there were no definitions, responsive and transformative language was not identified.

Who does "Gender" actively include?

Gender responsive was the highest category in accordance with how the documents used and perceived gender; evaluations generally showed inclusive terminology when reflecting on gendered attributes (UNICEF, 2004b, 2005b, 2013b, 2017a, 2019a, 2019c, 2020).

When referring to *gender*, 33% of the evaluations solely discussed women and/or girls (UNICEF, 2005a, 2005d, 2005f, 2006a, 2007a, 2008; 2009e, 2011b, 2014; World Bank, 2006a, 2006b, 2006c, 2008, 2011a, 2013, 2015, 2016c, 2017a) and were therefore seen to be gender sensitive. The remaining 54% were gender insensitive due to their lack of active attention to gender.

Discussions of gender

Responsive projects included substantial qualitative information about gendered attributes; this was present in 31% of evaluations in the form of detailed paragraphs on the background and experiences relating to gender throughout a project. These clear descriptions helped clarify the scope of the project in relation to its intended outcomes (UNICEF, 2004a, 2004b,

2005b, 2005c, 2005d, 2007b, 2010a, 2010b, 2011a, 2013a, 2013b, 2014, 2017a, 2019a, 2019b, 2019c, 2019d, 2020). Sections on gender included reflective evaluation questions such as "did the programme have a clear gender focused priority?" (UNICEF, 2019c, p. 35) and sections on common barriers and issues (UNICEF, 2019b).

Outside specific gender sections, or continuous acknowledgement, 16 evaluations included connected statements to help describe gendered considerations within the project (UNICEF, 2005a, 2005e, 2005f, 2006a, 2006b, 2008, 2009a, 2009d, 2009e, 2011b, 2013b)(29%) (World Bank, 2006a, 2009a, 2013, 2015, 2016c)(29%)). These statements explained gendered challenges within projects, so they are categorized as gender sensitive. They highlight self-critique and challenges in implementation, "moderate shortcomings…in its inclusion of women in the decision-making process" (World Bank, 2009a, p. ix), but did not elaborate on the nature or causes of these.

The remaining 22 evaluations (71% of World Bank, 25% of UNICEF) had single, isolated statements on gender. Some of these were responses from beneficiaries regarding the success of a given project, for example, "women respondents have identified several benefits" (World Bank, 2009b, p. 14). Others highlighted challenges such as: "[it was] difficult to address the problems of girls" (UNICEF, 2015c, p. 2). The evaluations made sweeping positive statements without offering substantial backing: "the program also increased perceived privacy and safety during defecation among women" (UNICEF, 2015b, p. 3); and "productivity, health and living standards and conditions of women" were "improved" (World Bank, 2006b). In neither of these cases was evidence provided to show how this had been achieved.

3.5.3 Broader themes emerging from the evaluation of project documents

Gender quotas

Quotas for participation in terms of gender (specifically women) were stipulated in 16% of the projects, seeking to balance overwhelmingly male decision-making bodies (UNICEF, 2005f, 2006a, 2013a, 2015a, 2019d (13%); World Bank, 2008, 2013, 2016b, 2017a)(24%).However, in each case, while these quotas were suggested in the project design, there was no evidence that women's participation would be specifically supported or measured, resulting in limited accountability. These suggested quotas were often unfulfilled. In one case, this was a direct consequence of user committees failing to pay women, resulting in their being "replaced by men in the post-implementation phase" (World Bank, 2017a, p. 19). These evaluations are intended to be responsive, to rebalance the current unequal power share, yet the reality of how the quotas really affected the communities is unknown.

Gender specialists

Evidence shows that projects identified a need for gender specialists within project teams (UNICEF, 2005b, 2009c, 2011b, 2013b, 2020)(13%) (World Bank, 2006c, 2009a, 2011b, 2013)(24%). The intention is to be gender responsive, or at least sensitive; however, this requirement was not always realized, meaning the programmes were, in fact, insensitive. In the 2006 World Bank project in Yemen, a gender specialist was identified for budget allocation, but this post had no budget attributed specifically, and was the only post for which a named specialist was not included (World Bank, 2006c). Similarly, there were instances of UNICEF projects that suggested that the inclusion of a gender specialist should have been present, but there was no clarity as to whether this happened in practice (UNICEF, 2019a).

Budgetary considerations

It was rare to see budget allocated or attributed to gender, and there was, overall, poor distinction of budgets and associated project attributes. Only two evaluations included clear expenditure statements that included gendered items (UNICEF, 2017a, 2020). Another three indicated a specific gender budget, but the evaluations do not clearly show whether this was delivered (World Bank, 2006b, 2013, 2017a).

When projects budgeted specifically for gendered elements, evaluations lacked information on expenditure. It was not possible to separate gender-related activities and funding from within general categories such as "miscellaneous institutional" (World Bank, 2017a, p. 3), the space where gender was usually located.

No evaluations reported a specific budget attributed to gender equality outcomes, even when gendered targets and objectives were present. The 2009 Morocco World Bank Project evaluation acknowledged this weakness, "no specific component or budget allocation had been made for the women's intervention, so that it tended to be neglected" (World Bank, 2009a, p. 11). The gender insensitivity in budgetary considerations is evident; money is not being held for gendered outcomes.

3.5.4 Survey responses

[Table 6] shows the key characteristics of 37 respondents to the survey.

Table 6 - Survey Participant Demographics

Gender	Man	Woman	Non-Binary	Prefer not to say	Other
	18	19	0	0	0

Context Experience	Asia	Africa	Europe	North America	Oceania	South America
	23	22	6	2	2	1

Past Experience	Non-Governmental Organization	Academia	Charity Sector	Governmental (National)	Governmental (Local)	Utility Company
	30	20	9	9	6	3

Past Experience	Non-Governmental Organization	Academia	Charity Sector	Governmental (National)	Governmental (Local)	Utility Company
	20	11	2	3	1	0

What is "gender" in development?

There was clear consensus among participants that gender goes beyond women. However, they shared the view that gender and women are often used interchangeably in development discourse, with one participant stating, "the dictionary definition and actual practice don't match" (*Participant A: Charity Sector, Man*).

All 37 participants agreed that gender referred to at least the consideration of the specific needs of women, but additional categories were also recognized in the participants' definitions: Girls (33), Men (23), Boys (21), and LGBTQ+ Persons (22), where LGBTQ+ was stated to refer to Transgender and non-binary persons or to other individuals that lie outside the gender binary.

However, mentions of these genders in the documentation does not necessarily account for those genders' needs in practice; often men and boys are included in gender programming, but "even now, men and boys are typically seen as support to 'help' women and girls—rather than looking specifically at their risk factors or unmet needs" (*Participant B: Academia, Woman*).

When looking at realistic inclusion in discussions about gender, the intention differs from the reality. After asking who is present *in reality*, positive responses further declined: Women (34), Girls (19), Men (19), Boys (7), LGBTQ+ Persons (5), and Other (1). The lack of acceptance in conversations, particularly from LGBTQ+ persons, may be driven by negative social pressures, "LGBTQ people, in my experience, tend not to raise their voices—perhaps because they risk discrimination and ridicule in many cultures" (*Participant C: NGO, Woman*). This reflects results from the analysis of evaluations, where gender showed instances of inclusion that were responsive (13%) and sensitive (33%), but most (54%) were insensitive.

Gender guidelines

The evaluations show a lack of attention to gender with regard to the project cycle, with most being insensitive in each category, and minimal projects reaching transformative status. Gender guidelines are one way the development sector has tried to make progress toward

gender equality, by providing case studies, examples of "best practice", and identifying key facility attributes.

Participants were therefore asked about the specific guidelines they used and who had published them: United Nations (21), International NGO (e.g. *WaterAid*) (19), National Government (18), Company specific (internal document) (15), World Bank (10), Local government (8), Other (6) (Optional Comment: DFID, Sphere, Funding organizations, Stonewall, Personal creations), and three participants stated they did not use such documents.

There were also different levels of institutional requirements to use these gender guidelines. Mandatory (6), Heavily advised (14), Optional (9), Not required (5), and Not applicable for my work (3). However, even when these documents are mandatory in theory, they often remained "not checked or enforced" (*Participant B: Academia, Woman*). A clear majority of respondents stated positive outcomes from the use of gender guidance with 29 respondents stating that they always (13) or occasionally (16) lead to better gender equality outcomes.

However, there is a lack of confidence in the guidance looking to improve the outcomes. This is caused by some documents being "badly written" (*Participant A: Charity Sector, Man*) or only working when they are "accompanied by operational guidance relevant for the context, training, and support to implement" (*Participant E: NGO, Woman*). The duration of a project can also create problems for the effectiveness of gender inclusion: "short lifespan and cultural norms which exclude people of specific genders can run very deep and may take generations or key legal changes to really change things" (*Participant C: NGO, Woman*). Guidance can therefore create positive outcomes to move projects away from insensitivity, but their usage needs to be monitored, and should ideally be enforced.

Validation of evaluation-identified challenges

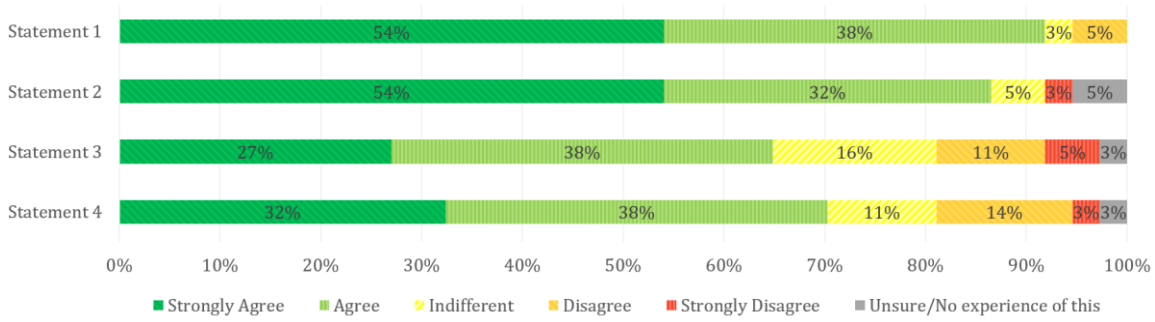
To assess the validity of the conclusions identified in the evaluation analysis and their wider significance, the main challenges and pathways to success were listed. From a multiple choice drop-down list, respondents were asked to identify the main challenges they found to achieving effective gender equality in WASH projects (⌜Table 7⌝), and the reasoning they had seen that led to increased gender equality outcomes (⌜Table 8⌝).

Table 7 - Number of positive responses to proposed challenges for gender equality in WASH

All genders are not involved in designing projects/policies	28 (76%)
All genders are not involved in implementing projects/policies	22 (59%)
There is limited targeted funding for gender equality in WASH	20 (54%)
Gender-related targets are not a priority when designing	17 (46%)

There is a lack of accountability for monitoring gender-related targets	25 (68%)
There is a lack of involvement from gender specialists when designing projects/ policies	21 (57%)
Projects/policies lack informed education work/campaigns to accompany work	10 (27%)
"Gender" is seen as "women's work" and often excludes men	21 (57%)
The triple role of women is not considered when attributing additional responsibilities	16 (43%)
There is a lack of recognition of gender equality as a "serious" attribute in projects/policies	21 (57%)
Other	2 (5%)

In addition to this, when asked about their relative agreement with the following highlighted challenges, participants reported coherent and consistent negative experiences of gender implementation across WASH projects (Figure 3).



Statement 1: Gender is not considered holistically in policies and programming, e.g., only considered in one section of a project, not throughout

Statement 2: Gender often fails to acknowledge the existence of Transgender, non-binary and other minority genders

Statement 3: There is a lack of funding available in WASH for gender-related items, e.g. projects/targets/jobs

Statement 4: Gender-related funding often gets redistributed to other 'priority areas'

Figure 3 - Proportional agreement of participants to statements regarding constraints to gender equality programming

Participants were also asked to state their agreement with the identified successful drivers in achieving gender equality.

Table 8 - Reasoning for successful gender equality outcomes reported by survey respondents

Equitable involvement of all genders in designing projects/policies	27 (73%)
Equitable involvement of all genders in implementing projects/policies	28 (76%)

Involvement of gender specialists when designing projects/ policies	24 (65%)
Specific gender-related funding was available	13 (35%)
Active efforts were made to educate project/policy beneficiaries	24 (65%)
Gender-related targets were created and measured	26 (70%)

3.6 DISCUSSION

There are major steps to be taken before gendered considerations and attributes are prominent in the practical implementation of WASH projects; there is a significant need "to revisit best practices of WASH and development" (*Participant G: NGO, Man*) if gender equality is to be achieved globally.

The availability of policy and guidelines does not correlate with increased equality in projects, just as organizations' intention of prioritizing gender equality or a project's objectives being geared toward gendered outcomes will not provide benefit unless institutional and structural barriers are overcome. Three overarching themes have been identified in this review and survey:

- Conceptualization and definitions of gender should acknowledge context.
- Reductionist methods of quantifying outcomes prohibit real change.
- Gender identity continues to restrict people's ability to participate equally and be heard.

3.6.1 Conceptualization of gender

As a social concept, gender is inherently tied to context, and coming to a globally agreed conceptualization would be to oversimplify; generating global definitions creates unambitious generalizations that do not provide clarity. Generalization would lose the complexities of regionally specific gender identities; being third gender is regionally specific to South Asia *(Boyce, P. et al., 2018)*, just as Transgender has different meanings globally *(Ryan, 2020)*.

However, standardized definitions, supplemented with context-specific recognition, could increase transformational approaches to gender equality. Setting country-based implementation protocols could help to identify how gender manifests itself in a given area and would provide guidance and clarity for organizations striving for transformational gender outcomes. This is important for WASH, especially sanitation, where there may be Transgender individuals being persecuted through anti-LGBTQ+ laws; Everyone has a

human right to sanitation *(United Nations General Assembly, 2010)*, but different access challenges arise at the global level.

The current lack of consistency in definitions and language creates an inability to truly evaluate gender inclusion. Without clear definitions, metrics, and baselines, progress cannot be evaluated within a project or externally between projects. Language tells a story; inconsistency does not reflect context-specific challenges, merely lack of clarity: "Documents only lead to better gender equity outcomes if they are accompanied by operational guidance relevant for the context" (*Participant E: NGO, Woman*). By including context-specific positionality statements with how gender is manifested, projects can consider specific barriers unique to that context and "address gender dynamics in a meaningful manner" (*Participant E: NGO, Woman*).

Currently "gender mainstreaming" as a concept is widely discussed, yet in Moser's review of the term, it was continuously used "loosely without a precise definition or elaboration" *(Moser, 2016, p.223)*. Without definitive language and techniques, there is no accountability: "It's obvious, isn't it? After decades of so-called gender mainstreaming, the problems of 25 years ago are the same now" (*Participant H: Academia, Woman*).

In order to move toward transformational change, minimum standards and definitions need to be combined with context-specific understanding. Current use of gender equality outcomes, targets, approaches, and definitions is inconsistently applied and prevents positive change in this arena.

3.6.2 Reductionist methods for quantifying change

Using quantitative methods to assess gender inclusion often results in reductionist thinking and generalized experience, and when a subject matter is broadly immeasurable by quantifiable terms, it is almost impossible to establish baselines and demonstrate change *(Attaran, 2005)*.

Gendered WASH objectives include "increased productivity" and "women's' empowerment" *(World Bank, 2013)*, or "reduced burdens" *(UNICEF, 2005f)*, yet the survey shows that 68% agree that there is a lack of accountability for monitoring gender-related targets, partly due to the vague language. The subsequent response is to quantify these targets to make them more "monitorable," but this can lead to reductionism: counting women on committees without reflecting on whether an enabling environment has been established to support their sustained participation. This bureaucratization of gender is problematic, not least due to the serious obstacles that prevent effective participation, gender bias being one *(Goetz, 2008)*. Where quantitative data are preferred, top-down target-based outputs are created as a "machine for implementing 'development' programs, an apolitical tool for delivering social services" *(Ferguson, 1990, p.65)*. Apolitical approaches do not work in this context, as gender is

inherently political *(Celis et al., 2013)*. But attempting to move away from quantifiable objectives has created vague and immeasurable targets that lead to the deprioritization of that work; there is no incentive to work toward targets that cannot be accurately addressed.

Qualitative and quantitative indicators can be used well to measure gender outcomes in WASH, but they need clear specification. Methods to quantify someone's well-being are complex, but conceptual models address this theory gap *(Ross et al., 2021)*. There are methods that can be used to qualitatively analyse implementation; both "Outcome Mapping" *(Earl et al., 2001)* and the "Most Significant Change Technique" *(Dart and Davies, 2003)* offer pathways to measure meaningful social change. Gender-sensitive frameworks, such as the one used in this article *(MacArthur et al., 2023)*, could also be a useful tool in evaluating projects, provided that they have contextual validation to ensure that they align with local need.

By implementing transformative programming and actively monitoring social change, gender equality measures are inherently addressed without the need for reductionist or vague targets.

3.6.3 Gendered restrictions on participation

Societal pressures can frequently affect a woman's ability to participate freely in development projects. Failure to recognize the burden of unpaid labour diminishes engagement in projects, and the assumption that gendered participation (in other words, the participation of a woman because she is a woman) needs no remuneration *(Maseno and Kilonzo, 2011)* constrains the very participation it seeks to foster. Both the evaluations and the survey in this study show that such restrictions manifest predominantly in the form of voices being suppressed.

Although the "increased role of women in official positions had a catalytic effect of group mobilization, transparency, and legitimacy" *(World Bank, 2013, p.24)*, this does not necessarily create progress. Either women are not heard, "women and girls may be at a discussion, but we really need to ask questions about whether they are actually heard" *(Participant D: Academia, Man)*, or their suggestions are not counted "They will listen to women who speak, but it ends there. Mostly, they do not work with what was voiced out" *(Dery, F et al., 2021, p. 240)*. Tokenistic engagement is not peculiar to WASH; public and political arenas use women in political power to signify progress, yet in reality this can disempower individuals due to lack of real power *(Ebohon, 2012)*.

Equally, it cannot be assumed that formal roles are best suited in all cases or that participation has to occur at the level of management. Informal networks and processes, including community feedback, are often as important, especially for marginalized genders that may face increased discrimination in formal or public positions *(Martinez et al., 2017; Brewster et al., 2014)*.

3.6.4 Additional minor themes

Project funding

Evidence shows sporadic clarity for the budget allocated to gender-sensitive activities (UNICEF, 2017a, 2020 (5%); World Bank, 2006b, 2013, 2017a (18%)). This is then exacerbated by the tendency to redistribute budget initially allocated for gendered activities or resources. Over 70% of survey respondents said they were aware of cases where funding that had been designated for gendered outcomes was redistributed. Even when gendered outcomes and objectives are made explicit and, in rare cases, funded, they apparently remain at risk.

UNICEF and World Bank policy in action

The existing policies of the World Bank and UNICEF that relate to gender have been present for decades *(UNICEF, 2013c; UNICEF, 2017c; World Bank, 2001; World Bank Group, 2015)*. So perhaps it is that the content of the policies is ill-suited to that task: "Is it enough to just say we need to be 'gender sensitive' when we were saying this a long time ago? Could it be that the message needs to be changed to be heard" (*Participant D: Academia, Man*).

Having recently published reports and reviews that generally assess the prevalence of gender mainstreaming across programmes in all their sectors *(UNICEF, 2021b; UNICEF, 2019e)*, the findings of this article agree with their generalized conclusion; there are still gaps when it comes to integrating gender inclusion, complexities are rarely acknowledged *(UNICEF, 2021b, p.6)*, and gender strategy is being underused *(World Bank Group, 2020a)*.

Analysis of the evaluations and surveys concludes that gender equality programming is complex, there is no single, true, universal solution, and the current proposed solutions are inadequate and undocumented. One potential avenue is to further investigate true transformative programming, where gender equality measures are inherently addressed without the need for reductionist or vague targets; transformative programming encourages active participation: "a team with an attitude of wanting to understand power dynamics and ensure inclusive access can be much more gender sensitive" (*Participant B: Academia, Woman*).

3.6.5 Limitations

This study has a bounded scope, focusing on two agencies and only on projects with published evaluations. This rendered the analysis manageable; however, these pragmatic decisions create limitations. The evaluations appear to be somewhat biased toward positive outcomes, in line with a sector-wide reluctance to address and publish apparent failures *(Sindall and Barrington, 2020)*. They also tend to focus on quantifiable outcomes for which data are readily available. This results in easy-to-read documents and an overreliance on reporting percentage-point changes in reductive targets, an approach manifestly ill-suited to reporting on shifts in gender

equality. Gender targets and objectives are social attributes that are difficult to translate into quantifiable data; therefore, these data are either not collected, not reported, or not discussed. However, as the guiding evaluation process for future projects, they are a legitimate lens through which to interrogate the understanding of trends in gendered project design and implementation. The survey was also limited to self-selecting respondents who may be considered to be atypically focused on and aware of, gender in all its complexity. Therefore, the results are not "representative" of the sector, but indicative of an aspirational lens through which the sector and its views on gender can be assessed.

3.7 CONCLUSION

These evaluations and survey responses show common challenges present in the execution of gender equality measures in WASH. When conducting the Gender Sensitivity Analysis, the framework identified substantial gaps in transformational gender inclusion. In four of the seven themes, not a single project was categorized as transformational, and in five of the seven most of the included projects were categorized as insensitive. The overwhelming evidence is that there is a lack of transformational gender equality outcomes designed into projects, and considerable improvement is needed in the way that evaluations portray and display gender.

Clear conceptualizations of gender that allow individuals to map context-specific challenges, allow for cross-sector ease of understanding, and inclusion of all genders present in a given contexts improving the likelihood of transformative gender equality in WASH programming. as, we need to recognize that gender identity manifests differently across a population.

Looking ahead, evaluations and policy need to ensure clarity and transparency of work. There should be active avoidance of reductionist indicators that fail to capture gendered outcomes. Outcomes need to be measurable and should define the scope of "gendered considerations" clearly in WASH, using standardized language throughout.

As this research shows, the information needed to make substantiated claims about gender inclusion was often missing. By increasing the attention paid to the success of gender equality outcomes, we can seek to understand what project elements lead to improved equality factors in WASH. By being clear about how and when gender is incorporated and the successes and failings associated with those choices, we can look to create more inclusive and, therefore, more successful WASH projects in the future.

CORRESPONDENCE

Hannah Jayne Robinson, University of Leeds, UK.

Email: cn16hjr@leeds.ac.uk

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DATA AVAILABILITY STATEMENT

The WASH evaluations used to support the findings of this study are available from the World Bank Group and UNICEF. The data were derived from the following resources available in the public domain: https://ieg.worldbankgroup.org/ and https://www.unicef.org/evaluation/reports#/

Survey data beyond the guidelines are not shared due to ethical restrictions.

ETHICS STATEMENT

The study was granted ethical approval on 26 April 2022 by the University of Leeds Engineering and Physical Sciences Research Ethics Committee.

3.8 Study Ramifications: Subsequent Exploration

Through analysing the prevalence of gender in WASH evaluations, and validating self-identified challenges with a sample of practitioners, this systematic review of multi-lateral organisation's WASH Project Evaluations verified the notion that, at least in this sample, there is a lack of gender inclusive programming in WASH –related development programmes.

Guidelines, policies, and organisations affirm the significance of gender equality, yet curating these measures does not directly translate to improved gender outcomes. The study highlighted the concept of extraversion, where although a culture of engagement in concepts such as gender equality are seen to be priorities for policies, guidelines and frameworks, the reality is that there is active avoidance of addressing the challenging societal roots of sanitation *(Gathanga, 2023; Hyde-Smith et al., Forthcoming)*.

This paper showed that the existence of guidance, policy and intentions alone cannot create transformative change in relation to gender equality principles, and wider definitions of gender need to be utilised to ensure the needs of all are recognised.

The systematic cross-agency assessment of these key international actors showed that gender equality principles are inconsistently applied across countries, projects, and primarily within the organisations themselves. In order to investigate the projected challenges and success pathways for transformational gender outcomes, a single-context, large-scale program was chosen as a case study to examine drivers of gender equality measures across different stakeholders. The criteria for selecting the program were influenced by Chapter 3's empirical work, to ensure a selected locale would have the accessibility required to delve into the challenges posed by the grounding work.

The criteria for choosing the large-scale country program were:

- Country-specific nation-wide WASH Program;
- Country-level recognition of gender equality *(through policies, programs and guidance);*
- Publicly available policy documentation;
- Access to multiple levels of the implementation chain *(policy designers, implementors, users);*
- Institutional recognition of more than two genders.

The program was specified to be country specific to examine complex interactions within a specific national context, exploring cultural, historical, economic, and political factors. Despite this focused approach, it is important to note that the author recognises existence of inherent heterogeneity within countries; the study location simply serves as a nuanced lens to delve into the complexities of a program's implementation within the broader national landscape.

As seen in the published article, organisations may inconsistently apply principles across programs. Selecting an organisation that is more likely to consistently apply measures should provide a standardised framework for analysis, enhance the reliability of findings and facilitate comparisons across different regions or demographic groups. One organisation that should apply principles consistently across a country is national Government.

The largest government-run sanitation program in the world took place in India between 2014 and 2019 *(Sandberg, 2020)*. The Swachh Bharat Mission (SBM) (*phase I*) claimed to create open defecation free (ODF) households across India, by providing, incentivising and subsidising sanitation for all citizens. By 2018, an estimated 450 million people were reported to have gained access to sanitation during the mission, through the creation of over 85 million toilets *(Ministry of Drinking Water and Sanitation, 2018b)*. Although there are critiques of the Mission that disagree with the specifics relating to the monitoring and the widely reported '100% open defecation elimination' statements *(e.g. Coffey and Spears, 2017; Malan et al., 2023; VerKuilen et al., 2023)*, the scale and resulting increase in sanitation access cannot be ignored.

Several studies have investigated the Indian Government's claims that the entire country is now ODF, quantifying the reality of sanitation access. These critiques estimate half the population have access to safely managed sanitation systems *(Behera et al., 2021; Prakash et al., 2022)*. This may be attributed to infrastructural challenges such as "lack of piped water supply, poor construction of toilet substructures and misconception among people about toilet use" *(Behera et al., 2021, p. 1)*, or how "socioeconomic characteristics of the households, such as religion, caste, wealth status and education, significantly influence access and usage of sanitation services in India"*(Prakash et al., 2022, p. 9)*.

Caste is social system that fixes individuals to a specific societal group at birth. The system originates from ancient Scriptures, and was upheld through Mughal rule and entrenched through British colonisation *(Angel and Arya, 2023)*. Caste typically designated occupations of an individual: the hierarchy is compromised of Brahmins (priests/teachers), then Kshatriyas (warriors/rulers), then Vaishyas (farmers/merchants), then Shudras (labourers), and finally Dalits/Untouchables (waste removers) *(Krishnamurthy, 2022)*. It inherently connects to gender through historic oppressive practices; "*the oppression of women - through the practices of sati [being burned on a funeral pyre with a deceased husband], widowhood, and girl marriage - played an essential role in the establishment and maintenance of the caste system by ensuring the rigid boundaries of caste*" *(Krishnamurthy, 2022, p. 236)*. This research focuses on gender equality, but how it connects to wider discrimination such as interlinked caste-based discrimination should not be sidelined.

The SBM had clear guidance and documentation across urban and rural components of the mission in addition to the general implementation guidance, which states a national-level commitment to gender equality principles. This documentation is publicly available, and thousands of civil servants worked on the program during its implementation, ensuring a large potential sample size. Included in this guidance were clear gendered components and annexures. Chapter 3 demonstrated that there is awareness of the need to include diverse genders in program design and implementation; 60% of the survey participants acknowledged there should be LGBTQ+ representation, but only 13% saw it happening in practice. The exploration of gender guidance therefore needed to be investigated somewhere with official recognition of diverse gender identities. Where there is recognition of a persons existence, there should be recognition of their needs. Gender is a holistic concept, and encompasses varying identities beyond cisgender men and women, and legal recognition of genders beyond men and women is present in only 16 countries, one of which is India *(Equaldex, 2023)*.

Research does not exist that seeks to investigate how gender equality principles were, or were not, an active part of the mission's programming. Beginning with an exploration of the SBM gender-related policies, the research in this thesis explores how gender equality principles manifest at a national scale, how they filter to implementation, and the challenges that prevent transformational practice.

4 CHAPTER IV

FOUNDATIONAL LITERATURE: INDIAN NARRATIVE

4.1 INTRODUCING THE SWACHH BHARAT MISSION

The Swachh Bharat Mission (SBM) was the latest in a series of government-run programs aimed at increasing sanitation coverage nationally in India. The major starting point was the 'Central Rural Sanitation Programme (CRSP)' which began in 1986, followed by the 'Total Sanitation Campaign (TSC)' 1999, then Nirmal Bharat Abhiyan (NBA) in 2012.

CRSP was the first national program and focused on providing latrines for the rural poor, providing subsidies to marginalised communities. It faced criticism for its lack of inter-sectoral approach to health improvements *(Nayar, 1997)*, with links to literacy, women's welfare, and water security stated as missing *(Sinha and Menon, 1996)*. TSC replaced subsidies with 'incentives' for the poorest households, and intended to put a focus on information, education and communication (IEC). However in reality "*low political priority, flawed monitoring, distorting accountability and career incentives, technocratic and paternalistic inertia, and corruption*" *(Hueso and Bell, 2013, p.1001)* led to poor outcomes. The NBA had the ambitious goal of providing every rural household with sanitation by 2022. Nonetheless, due to inconsistent implementation strategy, lack of staff capacity, and political and financial difficulties, the unrealistic approach to completion led to restructuring in 2014 *(Routray et al., 2017)*. This restructuring became the SBM.

As one of the largest Sanitation programs in the world *(Sandberg, 2020)*, it is estimated 110 million Individual House Hold Latrines (IHHL) have been built as a direct result of the program *(Government of India, 2022c)*, with approximately ₹45,850 Crore Rupees (£437 billion) *(Ahluwalia, 2021)* being mobilised by the World Bank and the Government of India across the duration of the 5 year program. Phase I of the program ran between October 2nd 2014, and October 2nd 2019, with Prime Minister Modi declaring the entire country open defecation free on Mahatma Gandhi's 150th birthday *(Langa, 2019)*. Phase II continues to create ODF+ and ODF++ areas by creating options for safe management of solid and liquid waste alongside ensuring functionality of services.

ODF	A city / ward can be notified/declared as ODF city/ ODF ward if, at any point of the day, not a single person is found defecating in the open

ODF+	A city / ward / work circle can be notified/declared as SBM ODF+ city / SBMODF+ ward / SBMODF+ work circle if ,at any point of the day, not a single person is found defecating and/ or urinating in the open, AND all community and public toilets are functional and well maintained
ODF++	A city/ ward/ work circle can be notified/declared as SBM ODF++ city / SBM ODF++ward / SBM ODF++ work circle if, at any point of the day, not a single person is found defecating and/or urinating in the open, all community and public toilets are functional and well maintained, AND entire faecal sludge/ septage and sewage is safely managed and treated, with no discharging and/or dumping of untreated faecal sludge/septage and sewage in drains, water bodies or open areas.

Definitions taken from the official Ministry Guidance Note on defining city status (Ministry of Urban and Housing Affairs, 2020a).

This research will focus on Phase I of the mission, which aimed to provide sanitation infrastructure in the form of household and public toilets. The hardware driven mission focused on building community, public and household toilets, with additional components of IEC intended to change behaviour to ensure uptake and usage of toilets. The mission had two distinct streams, the rural component (SBM-Grameen) and the urban component (SBM-Urban).

SBM-G centred around providing Individual House Hold Latrines (IHHL) to eliminate open defecation, and had a minor component dedicated to creating Community Sanitary Complexes (CSC) *(Ministry of Drinking Water and Sanitation, 2014)*. Households were expected to contribute towards the cost of the infrastructure, though the figure varies across states. Approximately 70% of households received government support, reducing the average cost of ₹16,262 (≈ £150) down to an average contribution of ₹9,942 (≈ £95) *(UNICEF, 2018b)*.

The SBM-U focused on providing Household, Community, and Public toilets *(Ministry of Urban Development, 2014)*, for settled, transient, and floating populations. Minor components also included solid waste management, IEC with the public, and capacity building of staff *(Ministry of Urban Development, 2014)*.

The missions were implemented by differing ministries (SBM-G: Ministry of Drinking Water and Sanitation, SMB-U: Ministry of Housing and Urban Affairs,) and had a tiered mobilisation mechanism to implement the program (SBM-G: National/State/District/Block/Village level, SBM-U: National, State, Urban Local Body). In addition to Government, community-based organisations, NGOs, self-help groups, and supporting organisations were utilised to help roll out SBM, especially SBM-G. Their job was to create awareness, dissemination and capacity building, provide hardware for the services, and monitor and evaluate behaviour change *(Ministry of Drinking Water and Sanitation, 2014)*.

There is a debate regarding the validity of the official government stance on the country achieving 100% ODF status, with data collected 3 years after the confirmation of India being ODF suggesting at least 11% of people in India are still practising open defecation, which is

more than 157 million people *(JMP, 2023b)*. In July 2023, the Director of India's International Institute of Population Sciences (the body responsible for the National Family Health Survey NFHS) was suspended, with colleagues citing the reason as for presenting accurate data that revealed evidence of open defecation *(Kaur, 2023)*. The NFHS-5 revealed India was not in fact ODF, and that 19% of the population had no sanitation facility *(International Institute for Population Sciences, 2023)*.

Critiques of the SBM centre around Government focusing on quantifiable outputs such as physical toilets over measuring genuine usage of facilities *(Coffey and Spears, 2017)*, government failing to reach financial commitments *(Mehta, 2018)*, and deeper engagement with socio-cultural factors *(Sharma, A., 2018)*. These factors are said to have led to curation of unusable and unsafe facilities. Multiple assessments of the state of facilities constructed during the SBM were undertaken. One study showed that during the program 70% of toilets lacked usability and 69% were deemed unsafe *(WaterAid, 2017)*; unsafe facilities "failed to guarantee the prevention of human contact with faecal matter" (p.11), and to meet usability criteria the facilities need to have "a solid wall and a roof, a door with latch inside, ventilation, natural light and water available in some form" (p.13).

These critiques are drawn from investigations into the challenges preventing open defecation, the overarching focus of the SBM; this research takes a different angle to investigate how the gender elements of the project were created and implemented.

4.2 GENDER IDENTITIES IN INDIA

4.2.1 Historical Prescence of Gender Diversity in India

India is currently one of only 16 countries globally that legally recognise more than two genders *(Equaldex, 2023)*. Both Urban and Rural components of the SBM included commentary on the need to include 'Transgender' persons when designing facilities and conducting behaviour change education, which will be explored in 4.3, but firstly context will be provided about how gender manifests and presents across India.

In India, and across the globe, the binary separation of men and women fails to account for modern concepts of gender manifestation in addition to multiple ancient diverse gender identities. There is evidence of multiple historical gender diverse identities globally, from Galli in Ancient Greece and Rome depicted in Metamorphoses *(Surtees and Dyer, 2020)*, to Hijra in India depicted in the Vedic literature *(Srinivasan and Chandrasekaran, 2020)*. Flexible constructs of gender are historically documented in non-western cultures *(Zamfira et al., 2018)*; including but not limited to Two-Spirit in Native American Communities *(Jacobs et al., 1997)*, Muxe in Mexico *(Ramirez and Munar, 2022)*, Kathoey in Thailand *(Saisuwan, 2015)*, Māhū in

Hawaii and Tahiti *(Ember and Ember, 2004)*, Waria in Indonesia *(Toomistu, 2022)*, Fa'afafine in Samoa, and Vakasalewalewa in Fiji *(Farran and Su'a, 2005)*.

Diverse gender identities are not a new concept in India; Hindu mythology references incarnations of gods in multiple genders, and includes stories around Hijra communities in the Vedic literature *(Srinivasan and Chandrasekaran, 2020)*. The historical and culturally specific identities include, but are not limited to Aravani, Hijras, Jogta/Jogappas, Kinnar, Kothi, Sakhi[4] *(Chakrapani and Naarain, 2012; Boyce, B., 2015; Bajaj and Indapurkar, 2018; Chatterjee, 2018)*. Each gender has different societal roles, standing and power, for example being Hijra is defined by its historic "*socio-religious and kinship norms*" *(Dutta, 2012, p. 845)*. The historical existence of these diverse genders is important for building evidence of gender beyond the binary, but should not negate the contemporary discrimination each may face *(Chisholm, 2018)*; historical recognition does not definitively imply modern acceptance.

During Mughal rule, people of gender non-conforming identities such as Hijras had high status in society, however during colonial rule, the administration criminalised such identities and removed civil rights *(Michelraj, 2015)*. The past criminalisation of diverse gender identities still holds ramifications in the 21st century; although 1952 saw the dissolution of criminalisation, prejudiced attitudes, harassment and discriminations is ever-present *(Hotchandani, 2017)*. For some individuals, there is movement towards the language of 'Transgender' in an act of upward mobility away from historical discrimination and harmful associations and misconceptions.

> *"Adopting the signifier trans-gender for oneself may also be seen as a sign of upward mobility; in some cases, to imagine oneself as transgender—as opposed to hijra, kinnar, jogta, aravani, and so forth—is to consciously reach for an idealized notion of gender non-conformity that is more often than not upper class and upper caste" (Chatterjee, 2018, p.314).*

[4] *As noted in the definition sheet at the beginning of the thesis, reducing these identities to associated gender presentation and biological markers to make them more widely understood is not in the scope of this thesis. They are culturally specific minority identities with contested definitions, and the researchers do not want to propose a correct definition as it is not their job to define an identity they are not part of.*

4.2.2 Legal Recognition for Gender Diverse People[5]

Key changes to government policy this decade have dramatically shaped the legal landscape for gender diverse persons in India. In a landmark change to the National Census in 2011, inclusion of an 'other' category identified 487,000 individuals that neither identified as women or men *(Government of India, 2011)*. At this time, genders in addition to male and female had no legal standing or discriminatory protections, so this figure is often critiqued to dramatically underreport the true number of gender diverse persons *(Behal, 2021)*. The first step towards national recognition of additional genders arrived in 2014; a historic judgement affirming Transgender fundamental rights under India's constitution *(National Legal Services Authority V. Union of India [2014] AIR 2014 SC 1863)*. This specified 3rd gender as an officially recognised identity.

Although now overturned on the basis of being "*arbitrary, discriminatory and a violation of the Constitutional rights of the Transgender community*" *(South Asian Translaw Database, 2016, p.1)*, as recently as 2012, the State Government of Karnataka amended the state police act to enable "*surveillance of Hijras who indulged in kidnapping of children, unnatural offences and offences of this nature*" *(Karnataka Sexual Minorities Forum V. State Of Karnataka [2015] W.P. 1397/2015)*, demonstrating recent hostile discrimination.

In a historic win for India's Queer community, and after 160 years of illegality, homosexual sex was decriminalised by the Indian Supreme court *(Safi, 2018)*. Section 377 of the British colonial penal code, introduced in 1861, called for imprisonment of anyone having *unnatural sex*, with the law being *"enshrined by the colonial British government (and defended by successive Indian ones)*" *(Safi and Singh, 2019)*. The decriminalisation of article 377 not only removed imprisonment for the colonially defined *unnatural sex*, but created new protections for Queer people across India, recognising gender identity and sexual orientation as ground for protections against discrimination in addition to sex:

> *"The Supreme Court in holding Section 377 to be unconstitutional recognizes the fundamental rights of sexual and gender minorities… By recognizing these twin aspects of gender identity and sexual orientation, the Court acknowledges the voices of the most vulnerable sexual minorities within the LGBTI community and takes the stand that the constitution protects the rights of all" (Kothari, 2019, p. 191-192).*

Following the constitutional amendments, 2019 saw the introduction of the Transgender Persons Protection of Rights Bill *(Government of India)*. The legislation theoretically created protections for minority gender identities, forbidding discrimination on the basis of education,

[5] Gender Diverse was the preferred terminology with the research participants for this study, so this will be the language used in this chapter to refer to gender minority communities (as opposed to LGBTQ+ or other options.

employment, health, occupation and accommodation, and detailed the process for someone to become a legally recognised Transgender person.

> *"A person whose gender does not match with the gender assigned to that person at birth and includes trans-man or trans-woman, person with intersex variations, genderQueer and person having such socio-cultural identities as kinner, hijra, aravani and jogta"*
>
> 'Transgender Person' definition according to The Transgender Persons (Protection of Rights) Act, 2019

Although the Act did not specify details pertaining to the water and sanitation rights of Transgender persons, two articles indirectly reference public and private sanitation systems; *"Provide such facilities to Transgender persons as may be prescribed" (Chapter V, Section 10 (page 10))* and *"Right to enjoy and use the facilities of such household in a non-discriminatory manner" (Chapter V, Section 10 (page 10))*. The high level commitments were regarded as a "*ray of hope*" *(Mahabelshetti, 2023, p.1)* by few. Predominantly, it received critiques for language choices, lack of enforcement and need for additional amendments and guidance *(Bhattacharya et al., 2022; Chakrabarti and Das, 2023; Shah, 2022)*. A 1000-person protest was held in New Delhi in the days before the document's publication, with issues around the ignorance of civil rights issues such as marriage and social security, and the "*bureaucratic layers and red-tapeism*" the Act would produce *(Pathak, 2019)*; the bill was signed two days later and did not address the concerns of the community it sought to protect.

In August 2022, the Ministry of Social Justice released the SMILE scheme (Support for Marginalised Individuals for Livelihood and Enterprise) *(Government of India, 2022d)*, originally comprising of two distinct Central Sector Schemes, first the 'Comprehensive Rehabilitation for Welfare of Transgender Persons' and second the 'Comprehensive Rehabilitation of persons engaged in the act of Begging' (*where begging is repeatedly noted as a key income source for transgender and Hijra populations (Banerjie, 2018)).* This scheme is the largest government run program to support gender diverse persons, and the Transgender component is to receive ₹2650 million (£26 million) between 2021 and 2026 *(Government of India, 2022a)*. The program does not explicitly mention Transgender sanitation outside designing shelter homes, even within those sections, information is limited *(Government of India, 2022b)*, the notes below dictated the only related clauses for sanitation:

- 1.2.4.5.A 200ft² for all toilet blocks (p.25)
- 1.2.4.5.C.j "For specially abled Transgender persons, the institution should have toilet facilities with reference to the Disabilities Act" (p.26)
- 1.2.7. Focus on "creating trans-safe toilets" (p.51)

Definition for what constitutes a 'trans-safe toilet' is absent.

4.2.3 Homogenising Identities and Experiences

> *"It seems that to bring together every "third gender" community under the rubric of transgender is to forget the mostly interlinked biological, cultural, religious, and geographic specificities of each community.... Within each community, there are different norms of kinship and diverse idioms and prescriptions of how to perform and articulate one's gender. (Chatterjee, 2018, p.314-315).*

The homogenisation of gender diverse identities 'Transgender' in the case of the 2014 judgement, 2019 Act or the SBM guidance fail to account for the diverse identities in India; both those unique to India and South Asia (e.g. Hijra, Kinnar, and Aravani) *(Chakrapani and Naarain, 2012; Boyce, B., 2015)*, and globally recognised identities including Transgender, non-binary and gender fluid *(Bhandari, 2021; Pundir, 2020)*. The *"overarching categorization"* serves to *"to erase gender specificity and diversity before the law and other mechanisms" (Boyce, P et al., 2021, p. 74)*, and the simplification of terminology results in obscuring challenges specific to an individual, *"cultural conflation of people born with intersex conditions with hijras further invisibilises the specific issues of intersex persons" (Alim et al., 2022, p. 2)*. The Act, associated laws and current activism therefore creates a space that fosters both *"new possibilities for recognition and misrecognition together" (Boyce, P. and Dasgupta, 2019, p.343)*.

In India, the national adoption of universal terminology diminishes identities, and causes friction between people assumed to have the same identity, especially between Hijra people and Transgender Women *(Mount, 2020)*. Chatterjee notes the tension with terminology and identity language as a *"knotted relation of the (transgender) subject with historicity and temporality"*, with people being caught between *"the fading voice of precolonial and colonial history on the one hand, and the strong pull of globalization on the other" (Chatterjee, 2018, p.311)*.

4.2.4 Sanitation for Gender Diverse Communities

Diverse gender identities are intrinsically tied to discriminatory access to healthcare, employment, housing and marriage, creating unequal experiences to that of cisgender and heterosexual persons *(Agoramoorthy and Hsu, 2015; Pandya and Redcay, 2021)*. For this research, the restrictive access to and challenges regarding the use of sanitation facilities are documented. It is known that gender diverse people, especially Transgender individuals, face technical and social barriers to accessing sanitation facilities *(Boyce, P. et al., 2018; Biswas, 2019; Chowdhary, 2021)*, including persecution, harassment and violence.

During SBM phase I, Transgender individuals did not have legal protection against discrimination, nor were their human rights to sanitation protected, and neither the

Transgender Act of 2019, nor any of the Swachh Bharat guidance mention the specific water and sanitation requirements or barriers for these communities.

In India there is a current national preference for separate Transgender bathrooms as opposed to gender neutral facilities, or mainstreaming Transgender access into binary facilities. In September 2023, the 'Advisory for ensuring the welfare of Transgender Persons' was introduced by the National Human Rights Commission (NHRC). This guidance seeks to create ease of implementation, and active use of the Transgender 2019 Act, as despite legal advancements of previous Act and Bill, discrimination of Transgender individuals remains in multiple aspects of their lives *(NHRC, 2023)*. The advisory indicates sanitation guidance, with the second clause under 'Promoting Inclusivity' specifying "*All public places should have separate washrooms for Transgenders*" *(NHRC, 2023, p.3)*. Transgender bathrooms are still uncommon in India, but they are being to be constructed across the country. These specific Transgender public toilets have been installed across the country, predominantly in cities in the North such as Mumbai *(Wajihudin, 2022)*, Delhi *(Rao, 2023)*, and Varanasi *(Mathur, 2021)*. Select private organisations such as the Indian Institute of Technology have also started to build Transgender specific toilets, with over 20 campus' featuring at least one facility *(Niazi, 2023)*.

The '#NoMoreHoldingMyPee' campaign in Assam *(Neog, 2022)* created attention around the need for gender neutral sanitation spaces, especially in educational facilities that would create safe spaces for gender diverse persons. Gender-neutral toilets have also appeared in Kerela, with the very first opening in Kochi, with an individual container style facility *(The New Indian Express, 2019)*.

Legal safeguards, infrastructure change and public awareness are all key components needing to be addressed for safe Transgender sanitation experiences *(Mishra, 2023)*, but minimal evidence documents the specific challenges, or the idealistic future as designed by gender diverse persons.

4.3 GENDER SPECIFIC POLICY DOCUMENTATION

To assess how gender guidance was used during SBM implementation, it first must be dissected. Throughout the project cycle the SBM had clear gender-related policies, and by the end of Phase I, there were six guidance documents covering both components of mission, and two connected guidance documents for related programs:

i. Guidelines for Swachh Bharat Mission (Grameen [Rural]) (2014)
ii. Guidelines for Swachh Bharat Mission (Grameen [Rural]) (Modified 2017)
iii. Guidelines for Swachh Bharat Mission (Grameen [Rural]) (Modified 2018)
iv. Guidelines for Swachh Bharat Mission (Urban) (2014)

v. Guidelines for Swachh Bharat Mission (Urban) (Modified 2017)
vi. IEC [Information, Education and Communication] Guidelines for States and Districts (2017)
vii. Menstrual Hygiene Management: National Guidelines (2015)
viii. Swachh Bharat: Swachh Vidyalaya [Clean India: Clean School] (2014)

(Ministry of Drinking Water and Sanitation, 2014) | (Ministry of Drinking Water and Sanitation, 2017c) | (Ministry of Drinking Water and Sanitation, 2018a) | (Ministry of Urban Development, 2014) | (Ministry of Urban Development, 2017) | (Ministry of Drinking Water and Sanitation, 2017b) | (Ministry of Drinking Water and Sanitation, 2015) | (Ministry of Human Resource Development, 2014)

This research denotes 'gender considerations' as elements that specifically refer to gendered language (women, girl, Transgender…), specifies the need for different facility features for different genders, or changes in dissemination and communication that demonstrate gender differences. Although many documents also discuss intersectional identities such as disability and age, Chapters 5 and 6 focus on direct gender considerations.

The specified guidance documents have been searched for all gender considerations to identify the ways in which the SBM policy documents presented their intention to include gender.

4.3.1 Guidelines for Swachh Bharat Mission (Grameen) (2014)

(Ministry of Drinking Water and Sanitation, 2014)

Document Overview: *The original SBM Grameen Guidelines served to document the background, goals, objectives, strategy and implementation of the rural component of the mission. The core component was to provide Individual House Hold Latrines (IHHL), but where this was not possible construction of a Community Sanitary Complex (CSC) was advised (either as a public toilet, or as a shared facility across households). The document dictates funding provision ratios for construction across Central Government, State Government and the Community (e.g. IHHL: 75:25:10 and CSC: 60:30:10), and stated the responsibilities at the National, State, District, Block and Gram Panchayat (Village) level, and how non-government support groups may help to implement SBM-G. It also included 9 annexures that identified the formatting of the documentation needing to be used for verification of ODF.*

In this document, the importance of menstrual health engagement is repeatedly reiterated for girls and women, however what is stressed is that there are "*funds available for the IEC*" which "*may be used to raise awareness, disseminate information and skills*" (5.2.12, p.11), this is reiterated again "*funds available under the IEC component*" (5.9.3, p.17). What this means, is that funds are only directly accessible around engagement and education, funds are not available to implement infrastructural considerations such as disposal mechanisms for used materials.

Incentives under the mission were to be given to "*women headed households*" (5.4.2, p.12), and priority was intended to be given to "*women and girls*" (5.9.1, p.17) in addition to other categories of people who were deemed to be at risk for access to safe sanitation. The incentives and definitions for 'priority' were not stated with the guidance.

Also under Section 5.9 (Equity and Inclusion) there is implied consideration of gender at all levels of SBM-G: "*requirements and sensitivities relating to gender, including dignity and safety issues, shall be taken into account at each stage of planning, implementation and post implementation management of sanitation issues*" (5.9, p.17). Yet detailed explanation of how this was to be achieved was absent.

Equal participation between men and women in the design and implementation of the program was intended to be demonstrated through a 50:50 split representation of the Village Water and Sanitation Committees (VWSCs). This participation was not sought to be monitored, nor was guidance given on how to ensure all members of a committee were able to freely participate.

The document shows no considerations relating to people who have identities in addition to men and women (e.g., Hijra and Transgender individuals).

4.3.2 Guidelines for Swachh Bharat Mission (Grameen) (Modified 2017)

(Ministry of Drinking Water and Sanitation, 2017b)

> ***Document Overview:*** *In 2017 SBM-G was updated to provide further clarity on implementing the program. New information, especially in the 18 annexures included administrative documentation (formatting for proposals, certificates, balance sheets, verification and reports), and a 3-page advisory for integrating Gender Issues directly into SBM-G.*

The 2017 SBM-G guide had major additions for gender considerations. The updated objectives now included a clear Gender Component: "*Create significant positive impact on gender and promote social inclusion by improving sanitation especially in marginalised communities*" (Objective F, page 3), and Annexure XI included the 'Guidelines on Gender Issues in Sanitation', a detailed account of ways in which gender should be addressed during the program. This annexure was circulated by the Joint Secretary of the Mission, to the Principal Secretaries of Rural Sanitation in all 28 states on 3rd April 2017 *(Ministry of Drinking Water and Sanitation, 2017a)*, the letter stated the guideline was to be used "*for due compliance*" (p.1), and asked for any initiatives taken to be reported back to the Joint Secretary in the central Government. The three-page guideline explores the need for gender sensitivity in regards to privacy, safety, harassment and violence, with an emphasis on the experience of women and

girls. The guide refers to steps to be taken in five key areas: the role of women, campaign messaging, maintenance, inclusivity and menstrual hygiene management.

The role of women was seen to be positive, but focused on community mobilisation as opposed to planning and technical decision making. Secretaries were therefore urged to ensure that 50% of VWSC seats were being held for women to actively diversify leadership, this was present in the 2014 guideline, but took on increased importance here.

The original messaging of the SBM was noted in this document to potentially cause "*reinforcing of gender stereotypes*" (p.2) through the focus on women's shame and dignity, especially notions relating to a woman's freedom of movement outside the home, or perpetuating ideas of women being weak and passive. The guide stipulates the need for messaging and education campaigns to not target solely women, especially when men often hold the power to make decisions around the home.

Maintenance was noted as a concern for gender equality, with cleaning jobs often seen to be an "*unclean job, often to be done by women*" (p.3). The guidance stated here was to ensure that messaging reflected the need for everyone in a family, "*irrespective of gender*" (p.3) to have equal responsibility around the cleaning and maintenance of a toilet.

The inclusivity section specified needed attention towards citizens of all genders to be included in SBM implementation, especially 3rd gender communities who can be "*dissociated from the mainstream*" (p.3). Inclusion measures included assurance that anyone could use the facility of their choice, and should be included in planning and championing of the program. There was no detail on how this assurance would be rolled out, or if it was specifically applying to IHHL, CSCs, or both.

Menstrual Health Management (MHM) was the final section for consideration, and highlights the main points from the 2015 MHM guideline, this is to be discussed below in detail, but generally covers water availability, disposal mechanisms, awareness, and accessibility measures such as lighting, locks and space.

The guide sought to ensure the implementation of SBM-G was completed "*in a way that is not just sensitive to gender issues, but also becomes a platform that enables the empowerment of women and girls and promotes human dignity*" (p.5).

4.3.3 Guidelines for Swachh Bharat Mission (Grameen) (Modified 2018)

(Ministry of Drinking Water and Sanitation, 2018a)

Document Overview: *2018 saw the release of the final SBM-G guidance. As with the 2017 update, the core of the document remained similar to the initial version, now with 33*

Annexures. The additional annexures concentrated on capacity building, with sections detailing World Bank assistance, guidelines for Swachhagrahis (Ambassadors of Cleanliness), and methods to decentralise verification. For the first time there was also specific instruction for states to increase construction of CSCs to account for floating populations after low take up in the first 4 years of the program (13,843 CSCs across all states and union territories).

The final update includes all previous gender measures (including the 'Guidelines on Gender Issues in Sanitation' from the 2017 iteration), the only other additional considerations were seen under Mission rational, with a note that poor sanitation for women and girls can lead to experiences of "*fear, shame and harassment*" (1.6, p.8), providing incentivisation and reasoning for the inclusion of gendered measures.

4.3.4 Guidelines for Swachh Bharat Mission (Urban) (2014)

(Ministry of Urban Development, 2014)

Document Overview: *The initial SBM-U guidance was released in 2014 and covered mission objectives, duration, components, strategy, funding, management and monitoring and evaluation. SBM-U covered Household Toilets, Community Toilets (shared spaces for densely populated communities), Public Toilets and Solid Waste Management, and this document details the beneficiaries, funding mechanisms, maintenance contracts, and management of these components. The document included an integrated Information, Education and Communication (IEC) section which states 15% of government funding was to be used on behaviour change strategies.*

The term 'gender' is used once in this guideline, with a note in the Annexure that states a "*separate seat [cubicle] may also be provided for trans-genders*" (Annex II, p.36). Other gendered considerations refer to the ratio of men:women for public toilet seats, urinals and wash basins, and a need to pursue priority groups such as households with "*girl children*" (2.5.5, p.5), and section 5 states the importance that "*facilities have adequate provision for men, women and facilities for the disabled*" (5.2.1, p.9 and 6.2, p.10). The guide does not seek to explain gendered differences in sanitation or any of the measures mentioned in the SBM-G initial guide that would be relevant (e.g. dignity, safety, MHM, and leadership quotas), nor does it identify potential social barriers including discrimination, which is a frequent occurrence for Transgender individuals *(Biswas, 2019)*.

4.3.5 Guidelines for Swachh Bharat Mission (Urban) (Modified 2017)

(Ministry of Urban Development, 2017)

Document Overview: *The 2017 update predominantly added information pertaining to the proportion of funds to be used across the differing components across national, state and community commitments, and increased services that could be used for utilising capacity building and administrative expenses. Similarly to the 2018 SBM-G update, this document also called for greater attention to ensure that urban local bodies were ensuring public toilets were available and functional.*

There is no additional information in this update that pertains to gendered measures.

4.3.6 IEC Guidelines for States and Districts (SBM-G) (2017)

(Ministry of Drinking Water and Sanitation, 2017b)

Document Overview: *The Information, Education and Communication (IEC) is a specific SBM-G guide aimed at providing strategies and planning to aid behaviour change, and stated 8% of the total SBM-G funding must be used for this purpose. This guide, at 15 pages, provides significantly greater detail than the single page 2014 SBM-U guide, or the two page 2018 SBM-U guide. Published in 2017 it documented the activities so far, with predominantly refer to the low utilisation of IEC strategies and funds. The guideline was released following a low undertaking of IEC activities, with less than 30% of states having uploaded plans in the first 2 years of the mission, and only 5 states appointing IEC consultants (p.2). The document clearly set out the roles for states and districts in implementing, monitoring, and evaluating IEC strategies.*

The guide explores the role of IEC at the state, district, block and village level, with attention to capacity building and monitoring and evaluation. There are 12 ways in which IEC can be developed and implemented, but the only instance of a gendered consideration is in section 4: Song and Drama Activities, where "*performers from the third gender may be engaged by the district for song*" (Annexure 3, p.10). There is no detail about the potentially harmful messaging that was highlighted by 'Guidelines on Gender Issues in Sanitation' annexure attached to the 2017 update of the SBM-G released the same year, neither is there acknowledgement of the need to create equal opportunities for everyone to engage in IEC or general inclusivity measures during implementation.

4.3.7 Menstrual Hygiene Management: National Guidelines (2015)

(Ministry of Drinking Water and Sanitation, 2015)

Document Overview: *The MHM guide is not an official SBM guide, however, it was released during SBM Phase I, has a section dedicated to SBM, and other guides that are*

directly part of SBM refer to this guide. The National Guidelines explore reasoning for their curation, the barriers that currently exist to providing safe facilities, and the ways in which infrastructure play a vital role in sustainable development.

The section dedicated to SBM integration although present, is brief. One page in a 36 page guideline states the general principles that should be adhered to: "*Issues relating to women's personal hygiene, namely menstrual hygiene, are to be focused under the SBM (G)*" (Part 1, p.2). The guide continues to describe the need for girls, women, men, boys and whole families to have awareness of menstrual health, and women and girls specifically have access to materials, a private and clean facility, in addition to a disposal mechanism for used materials. The section does not explore what a 'private' space entails, nor does it expand upon what 'sufficient' and 'affordable' materials are.

The guideline continues to expand upon the barriers to sustainable MHM, with examples of hygienic materials, infrastructure design options (shelves, hooks, mirrors, places to change, places to dry), potential means of disposal and collection for used materials and explores a range of follow-up material around capacity building, facilitation and additional reports.

4.3.8 Swachh Bharat: Swachh Vidyalaya (2014) *(School Sanitation)*

(Ministry of Human Resource Development, 2014)

Document Overview: *The Clean India: Clean Schools campaign began in 2014 and ran alongside the SBM-G and SBM-U curation. The document explores the benefits of WASH in schools, connections to a legally enforceable rights framework, the current status of WASH and the functionality gap for services, and identifies the key programmatic elements (infrastructure, behaviour change and operation and maintenance). The infrastructure component has a detailed design guide, with 22 essential items needing to be included (e.g. partitions between urinals, lightweight roof covers and incinerators in girls toilets).*

The guide begins with initial statements of intent for facilities to be gender segregated (p.1, p.3) in addition to being appropriate, inclusive, and accessible. These statements are explored in a set of five design principles, each with a cost guide: 1. Gender segregated toilets with handwashing point and incinerators, and water supply in each toilet blocks and urinal, 2. Group handwashing facilities with soap, 3. Drinking water, 4. Operation and maintenance, consumables and repair of facilities per year, 5. Behaviour change initiatives in schools (p.27). In addition to physical infrastructure, the guide specifies a need to focus on "*removing gender, socio-economic and disability barriers*" (p.7), however the only information on how this is achieved is through overview statements such as "*by promoting inclusive design*" (p.2). Inclusive design is promoted to create "*user-friendly, child-friendly facilities that benefit all users, including*

adolescent girls, small children and children who are sick or disabled" (p.2), however detailed options on how to accomplish this are absent.

Overall Findings and Expectations

The documents show there is explicit consideration of gendered needs throughout the SBM, across both Urban and Rural components of the implementation for Phase I. In compilation, the guidance calls for active consideration of gendered needs, from infrastructure requirements to social barriers such as discrimination. It seeks to include multiple genders (including Transgender persons) and describes the need to promote human dignity across all programming.

However, what is also evident is the lack of detail for implementing the proposed measures, and the accountability for ensuring them. The ideas raised in the documents provide a base to enable gender sensitive programming, but the limited technical and financial resources that accompany the guidance limits usability from the outset. Following the conclusion of Phase I in 2020, the Ministry of Urban and Housing Affairs released their 'Gender Responsive Guidelines Under Swachh Bharat Mission (Urban)' which details 'issues, solutions and case studies' for future SBM phases *(Ministry of Urban and Housing Affairs, 2020b)*.

The guideline explores challenges in gender and sanitation, building on commentary from previous SBM guidance, with reference to the need for consideration of intersectional identities (gender, age, disability), disproportional health impacts of poor sanitation, and safety concerns around dangerous facilities. The guide identifies increased social capital, improved health, empowerment and efficiency as direct consequences of guide implementation. What the guidance does not state is the reason for additional guides; did Phase I of SBM fail to create gender sensitive facilities? This research seeks to answer this question.

Currently one article exists that critique gender in Swachh Bharat focusing on campaign messaging within SBM-G *(Basnet and Hoque, 2023)*. The review explores the challenges around the campaign messaging focusing on women's dignity being tied to men's actions, exposes the weak links between women becoming empowered and gaining access to sanitation, and critiques the gender roles and attributes presented to become 'real men' and 'powerful women' in regard to sanitation.

5 CHAPTER V

GENDER GUIDANCE USABILITY AND IMPLEMENTATION IN SWACHH BHARAT PHASE I

5.1 CHAPTER OUTLINE:

The Swachh Bharat Mission (SBM) theoretically provided millions of people with access to new services, but the reality is often challenged. One reason for this gap could be the lack of attention paid to gender equality guidance; its implementation is neither tracked, nor is there current evidence of its use. National gender guidance exists for SBM, in both direct implementation guide documents and compendiums, as listed in section 4.2.

National level inclusion of gender equality policies in WASH programming has increased attention for the need to strive for equitable services, yet the existence of national guidance does not necessarily align with India's cooperative federalism approach to governance. Following the independence of India from British rule, cooperative federalism has been utilised to drive less centralised governance and provide states independence and power *(Aiyer, 1960)*. In doing so, room for flexible implementation and space for creativity is present, but does lead to dissonance between national and state priorities.

Interviews and focus group discussions were used to collect information on how attitudes, understanding, and implementation of guidance differs across state lines; does national guidance affect state implementation? Qualitative analysis using the System of Innovation Policy Framework combined voices of Government officials, WASH Practitioners, Activists and community members creating evidence detailing the challenges and successes for gender-related outcomes in the mission's implementation.

The findings discussed in this chapter are in accordance with previous mission challenges: limited ministry coordination and unaligned principles and implementation *(Hueso and Bell, 2013)*, demonstrating limited growth and awareness between historical programs. The SBM provided millions of toilets, so technical outputs were present, but without nuanced monitoring and accountability, 'additional' program elements such as gender inclusivity were discounted as vital program elements.

5.2 AIM OF THE STUDY:

The SBM was the first program globally that lead to an announcement of a whole country becoming ODF. It is therefore a reasonable assumption to make that the program must have innovative design and implementation to create this change. This chapter explored areas of positive deviance (those awarded for their commitment to Swachh Bharat goals), investigating gender inclusion presence in the selected locales.

At a national level, SBM policy stated gender was an important element to the mission, and multiple guidance documents existed to advise practitioners in this area (as evident in section 4.2). However, evidence suggests that gender insensitive planning, design and implementation has consistently been found across sanitation programming in India. Many existing critiques of the mission in relation to gender centre on issues of over-homogenisation and simplification of gender and avoidance of challenging gender roles and relations *(Basnet and Hoque, 2023)*; something highlighted as a challenge to address in the gender guidance.

There is clear dissonance between the designed gender guidance, and the reality of gender equality outcomes during the program implementation. This research identified the social and structural barriers that prohibited true innovative practice at a national scale, detecting the hurdles preventing gender guidance use.

5.3 METHOD:

5.3.1 Interview and Focus Group Methodology

Chapter 4 established that gender equality was intended to be a component of SBM. This study documented experiences of gender guideline use and avoidance, collecting perceptions of staff working on the design and implementation. The work was inductive to allow for knowledge providers to lead open discussion, therefore qualitative methods were used to allow for discursive answers. This study was reported according to the COREQ guidelines for processing qualitative research *(Tong et al., 2007)*[Appendix G.1].

Initially the study focused on key informant interviews. These interviews focused on the process by which guidance was written, the intention behind them from the government perspective, and the reality of implementation from the perspective of implementing partners. In addition to this, three community focus groups were run with an implementing partner, after suggesting the need for community voice in this study. These short discussions meant perceptions of challenges were able to be explored by professionals and those directly affected by programmatic choices.

Interviews and FGDs were open-ended and discursive. Interview Prompt Questions and Research Introduction (Appendix D.2) were available before the discussions if requested. All interviews and practitioner FGDs were conducted in English at the Participants request, the community FGDs were conducted in Hindi with local translator and research partner. The partner organisations are working to increase WASH Provision, hopefully reducing bias due to intentions being aligned across researchers and supporters.

After completion of the interviews and focus groups, participant checking of transcripts was not done to ensure the safety of participants. Often participants critiqued the structure of government and their own organisations, and sending back transcripts could have put participants in danger, especially government staff, due to the restrictions on free speech around government activity.

5.3.2 Sampling and Recruitment

Interviewees needed to have experience working in WASH, Swachh Bharat and gender-related topics. They were selected purposively through key word searches on LinkedIn ('Gender' + 'Water / WASH / Sanitation' + location: India), through government of India and prominent NGO staff pages (which will remain unlisted to preserve anonymity), via Twitter calls, and through personal connections to the research team. Participants were contacted to via email or LinkedIn with an official request letter, to validate the study and demonstrate formality of the research after the supporting organisation suggested it would result in a higher proportion of positive responses [all recruitment materials are available in Appendix E.2]. The level at which the interviewees worked at (early vs late career) was not specified as to collect a wide range of experiences at multiple levels. Snowball sampling was also used, with interviewees often suggesting additional colleagues that they thought would have valuable additions to the research after completion of their interview.

In addition to the final list of participants, a further 19 individuals were contacted for interview. Five individuals were unavailable for planning discussions, ten were unable to find time in their schedule, two agreed but later decided they did not have the right expertise, and one decided not to take part upon my arrival but suggested a more suitable colleague.

The small focus groups were organised by the implementation partners. The lead researcher was invited to attend existing community groups they were working with and ask a small selection of questions pertaining to the research. These groups were spoken with at the request of the organisations to add community voice to the current sample. The organisation works in WASH research, particularly with women and differently abled groups (preferred terminology of the participants), so these were the groups the researcher was able to briefly speak to during data collection.

5.3.3 Data Collection

In April to July 2022, 78 individuals took part in this research across individual interviews (22), practitioner focus groups (2 groups (5 people total)), and community focus group discussions (3 groups (51 People Total). Between April and June of 2022, the lead researcher was based in India, and was able to attend interviews and focus groups in person where possible, with some taking place virtually if more convenient. In July, after arriving back to the UK, the remaining interviews were completed virtually. Participants were government personnel, activists, WASH practitioners and community members. Both FGDs and Interviews were carried out at a time suggested by participants and lasted no longer than an hour. They were conducted in offices, cafes and online, these locations were specified by the participant dependant on where they felt most comfortable to hold interviews. Participants were asked to consent to audio-recording, research notes were made to supplement these discussions. In instances where participants asked not to be recording, general notes were made in addition to the lead researcher noting down specific phrases used in lieu of a whole recorded conversation. Table 9 and 10 list the participant demographics.

Table 9 - Demographics of Participants for Individual Interviews and Practitioner Focus Groups:

	Sector[6]	State	Gender	Relationship[7]	Approached	Where	Date	Recorded[8]
				Individual Interviews:				
1	Government	Delhi	Man	3rd	Email	Office	11-May	Yes
2	Government	Delhi	Man	2nd	Email	Office	01-Jun	No
3	Government	Tamil Nadu	Man	3rd	Email	Online	07-Jul	Yes
4	Government	Telangana	Woman	2nd	Email	Office	13-Jun	Yes
5	Government	Telangana	Woman	2nd	Email	Office	14-Jun	No
6	Government	Telangana	Man	3rd	Email	Office	14-Jun	No
7	NGO	Delhi	Woman	1st	Face-to-face	Office	06-May	Yes
8	NGO	Delhi	Woman	3rd	LinkedIn	Café	20-May	Yes
9	NGO (p.gov)	Delhi	Woman	3rd	Email	Café	24-May	Yes
10	NGO (p.gov)	Delhi	Woman	2nd	Face-to-face	Online	21-Jul	Yes
11	NGO	Delhi	Woman	2nd	LinkedIn	Online	22-Jul	Yes

[6] Where 'Sector': _____ (p. ____) : Current Sector (previous sector)

[7] Where 'Relationship' refers to existing connections to the research team:
- *1st: Participant was known personally to one of the research team prior to interview;*
- *2nd: The participant was identified through a colleague or previous interviewee;*
- *3rd: No connection was established between participant and research team prior to interview.*

[8] Where 'Recorded' refers to participant agreeing to be audio record the interview.

12	NGO (p.gov)	Delhi	Man	3rd	LinkedIn	Office	25-May	Yes
13	NGO (p. gov)	Delhi	Man	3rd	LinkedIn	Online	10-Jun	Yes
14	NGO	Tamil Nadu	Man	3rd	LinkedIn	Office	08-Jun	Yes
15	NGO	Tamil Nadu	Man	3rd	LinkedIn	Café	10-Jun	Yes
16	NGO	Telangana	Woman	3rd	Face-to-face	Office	14-Jun	Yes
17	NGO	Telangana	Man	3rd	LinkedIn	Café	15-Jun	Yes
18	NGO	Rajasthan	Man	2nd	Email	Online	18-Jul	Yes
19	Academic	Tamil Nadu	Woman	3rd	Email	Office	09-Jun	Yes
20	Academic	Telangana	Woman	3rd	Email	Online	13-Jun	Yes
21	Academic	Telangana	Woman	2nd	Email	Office	15-Jun	Yes
22	Academic	Telangana	Man	3rd	Face-to-face	Office	15-Jun	Yes
			Practitioner Focus Group Discussions					
23a[9]	NGO	Delhi	Woman	3rd	LinkedIn	Office	26/05	Yes
23b	NGO	Delhi	Woman	3rd	-	Office	26/05	Yes
24a	NGO	Tamil Nadu	Woman	1st	Linked in	Office	07/06	Yes
24b	NGO	Tamil Nadu	Woman	3rd	-	Office	07/06	Yes
24c	NGO	Tamil Nadu	Woman	3rd	-	Office	07/06	Yes

Table 10 - Demographics of Participants for Community Focus Group Discussions:

	Community	**Facilitators**	**Number of Participants** Total	*Women*	*Men*	**Location** *(Rajasthan)*	**Recorded**
25	Women's Self-Help Group	1	20	*20*	*0*	Community Centre	No
26	Women's Self-Help Group	1	19	*19*	*0*	Community Centre	No
27	Differently Abled Group[10]	*2*	12	*9*	*3*	Office	No

The identifiers used for participant interview quotes relate to the information present in tables 9 and 10. Participant G-DE-M-1 is a government employee, based in Delhi, and the 1st man with those characteristics (participant 1), as follows G-DE-M-2 is participant 2. The following code was used for each identifier: G-Government, N-NGO, A-Academic, De-Delhi, T-Telangana, TN-Tamil Nadu, R-Rajasthan, W-Woman, M-Man. Focus Groups were labelled as individuals from a specific FGD (e.g. Participant A: PFGD – TN).

[9] These small practitioner focus groups were completed after the initially contacted interviewee (participants 23a and 24a) stated they'd prefer a group setting with colleagues.

[10] This is the terminology used by the community group. Participants recommended 'differently abled' to be used to describe themselves as opposed to other related terms such as disabled.

5.3.4 Study Location:

Study locations were chosen through a positive deviance approach; identifying geographical areas that were presented as statistically excellent in sanitation coverage. The concept of positive deviance identifies behaviours that have led to constructive outcomes *(Marsh et al., 2004)*; in this work, it refers to the choosing of cities and states that have been awarded for their "*levels of cleanliness and active implementation of Swachhta mission initiatives*" *(Ministry of Housing & Urban Affairs, 2020, .p10)*. The Swachh Survekshan was used to identify these statistically excellent areas. The Swachh Survekshan is a sanitation and cleanliness survey carried out by National Government and has existed yearly since 2016. The 2022, 2021 and 2020 national sanitation surveys were used to determine the study locations *(Ministry of Housing & Urban Affairs, 2021; Ministry of Jal Shakti, 2021; Ministry of Housing & Urban Affairs, 2020; Ministry of Jal Shakti, 2020)*. Both the North and South of India was explored to document differing challenges and attitudes across diverse state lines. The survey identified the cleanest states, cities, and districts through observation through geo-tagged photos, citizen feedback, and government documentary evidence. The coverage of gender guidance was then be explored in relation to this; are statistically excellent cities using gender guidance to create these facilities, or are these excellent locales exclusively meeting the required proforma for an award and not progressing beyond?

New Delhi was initially chosen due to the accessibility to national government, this decision was confirmed after the 2020 survey which labelled the National Capital Territory one of India's Cleanest State and the Cleanest Small City (New Delhi Municipal Council, part of the Delhi metropolitan area), and then awarded Platinum City Standard in 2021. Hyderabad and Chennai were chosen for their Urban and Rural awards. Hyderabad has historically won 'Best Mega City in 'Citizen's Feedback'" in 2020, and Telangana was the leading 'Cleanest Large State' in 2022. Chennai won 'Best Mega City in Innovation & Best Practices' for 2020 and came 3rd in the 'Cleanest Large State' in 2022.

Although both rural and urban elements of Swachh Bharat were examined, the data collection was primarily completed in cities due to ease of access to implementors, vicinity to high profile government offices, and access to national and state-level headquarters for activist organisations. Research was carried out in person in New Delhi, Chennai (Tamil Nadu), Hyderabad (Telangana), and Jaipur (Rajasthan) with online interviews and Focus Group Discussions taking place with those unable to be reached in person. FGDs were carried out in Rajasthan where one of the partnered anonymous organisations is based. Here experiences of community activist groups were explored that included accessing and using sanitation infrastructure, and in some cases, designing and building their own. The lead facilitator was then additionally interviewed, to further draw out ideas identified in the FGDs.

Participants shared experience from their current location, but were not restricted to talk about these chosen areas solely if they had additional information that they believed to be relevant to the study that was prevalent across multiple state lines.

5.3.5 Analysis

Interviews and focus group discussions were used to collect information on how attitudes, understanding, and implementation of guidance differs across state lines; does national guidance affect state implementation. Initially the positive deviance approach used in selecting the locations for the study was intended to continue, highlighting transformational gender practices. However, participants predominantly steered discussions towards challenges that prevented incorporation of gender guidance, identifying that leading locations did not necessarily have holistic gender inclusion. The research therefore pivoted from wanting to explore the positive instances of gender inclusion, to investigating the barriers preventing guidance uptake and creating transformational practices even in these high-performance settings.

The analysis began with an exploration of the usage of gender guidance through participant perception of use. After establishing the use/misuse of the guidance, the pathways were categorised according to the system of innovation (SI) policy framework *(Woolthuis et al., 2005)*; this framework seeks to find challenges that prevent innovative practice. SBM was innovative in aims, and elements of the gender guidance genuinely tried to break social stigma, yet discussion led by participants helped identify the challenges preventing gender inclusion.

The framework categorised experiences according to the type of system failure, and the level at which the actor's experience corresponds to. These levels enable categorisation at a societal level (social norms, political will), organisational level (structural, administrative and legislative barriers) and individual level (personal biases and beliefs). The rules of the framework remain true to the original framework, with the system failures covering Infrastructural Failure, Institutional Failure, Interaction Failure, and Capabilities Failure). Infrastructure covers engineering and technical program elements, institutional refers to the organisation a participant is a part of and the values and structures belonging to it, interaction covers the coordination of people and the ability to share information, and capability refers to the allowable change an actor is able to make according to their capacity.

NVivo *(QSR International Pty Ltd, 2018)* was used for qualitative analysis to code the transcripts according to the framework's principles. Table 11 depicts the 12 categories of challenge identified by participants in the discussion.

Table 11 - Adapted SI Policy Framework for Qualitative Analysis *(Woolthuis et al., 2005)*

Actors / **Rules** *(System Failures)*	Society	Organisation	Individual
Infrastructural Failure - *Water and Sanitation Systems* - *Technology*			
Institutional Failure *I. Hard: Laws, Regulation* II. *Soft: Norms, Values, Guidance*			
Interaction Failure *III. Network Failure* IV. *Dissemination*			
Capabilities Failure *V. Capacity of actor*			

5.3.6 Ethical Considerations

Prior to the interviews and FGDs, participants were given a Consent Form (Appendix A.2), Participant Information sheet (Appendix B.2), and a Research Participant Privacy Notice (Appendix C). These had to be read and signed before conversations were allowed to begin.

The only identifiable personal information collected was the interviewee's gender, job sector and state location, and for focus groups the name of the collective community.

The study was given Ethical approval by the Engineering and Physical science Research Ethics Committee at the University of Leeds in 2022, and again with amendments in 2023, with reference MEEC 21-020.

5.3.7 Disclaimer:

This research critiques the implementation of gender guidance usage within Swachh Bharat. It does not seek to criticise the mission in full, nor does it intend to negate genuine success of the program. This study focuses on gender inclusion in India, however the gap between available policy and practice is not confined to this program, nor this country. Evidence exists that demonstrates this gap globally, with critiques of NGO organisational policy, limited mainstreaming of disability inclusion in WASH and gaps in water security practices to highlight a limited selection *(Dennehy et al., 2014; Groce et al., 2011; Lankford et al., 2013).*

5.4 RESULTS:

5.4.1 Goals of the SBM: Is gender guidance used in practice?

The Swachh Bharat Mission's main goal was to eliminate open defecation (OD). The associated gender guidance was designed to promote safe, affordable, well-maintained facilities, combined with non-problematic messaging and education campaigns that worked to minimise harmful stigma and taboos around sanitation.

The government of India's official messaging on the status of OD is that 100% sanitation coverage has been reached. All government employees interviewed agreed with this message. Academics and those at NGOs, agreed that over the course of the program *"India has travelled far" (N-De-M-1)*, that there have been "*huge and unprecedented"* changes (N-De-W-4), and that relatively SBM has caused "a huge shift… it's way better than what the other programs covered" (PFGD-TN-1).

However, although there is consensus of increased access and awareness of sanitation, every participant not affiliated with government stated India is not completely ODF, and there is not 100% sanitation coverage across the country:

"There's open defecation going on right now, five minutes from us" (N-De-W-2)

"Many toilets which have been constructed in SBM are demolished nowadays" (N-De-M-2)

"Yes, there are physical toilets that are built, but it is not open defecation free" (N-De-W-5)

According to the gender guidance, sanitation facilities should follow a set criterion as described in the nine associated documents in Chapter 4. Gender should incorporate the needs of all, paying special attention to the needs of women and Transgender persons, and should do so in a way that is not harmful. Although India has a rich history of multiple gender identities, participants stated lack of clarity for gender beyond the common association of 'women-only';

"I think gender in India, if we talk about gender, people mean women. The main focus is on women, and I think most of our programs are all women centric" (Participant A: PFGD – TN)

"I would say the misconception of gender and sex still exists in India. What is attributed towards gender or what society has attributed to gender is again a big question. Gender studies is a huge diaspora. It's not just women. So that concept of understanding gender studies." (N-Ra-M-1)

"Within the Indian context, unfortunately there's just a slither of people who believe that gender is more than two normative genders, and that's literally a slither. Most people, men and women, I wouldn't comment for the other genders, but for men and women, CisHet (cisgender, heterosexual) men and women, they do believe that gender means women, it's synonymous with women, which it isn't" (N-De-W-2)

The focus on infrastructure over usability has meant that the social elements are often forgotten or purposefully discarded; *"Gender has always meant giving infrastructure to women. Not the agency, not the power or something like that, it is very infrastructure oriented" (N-De-W-3).*

The focus on cisgender women fails to address barriers to safe sanitation for Transgender, 3rd gender and Hijra communities. Although the predominant response from participants was uncertainty, *"it's something the program it has sort of forgotten, that is never touched very well" (N-De-W-3)*, those that had worked with Transgender communities stated *"If they are transwoman, it's not very easy for them to use the women's section of the toilets" (N-De-M-1)*, to the extent that *"they are so scared to use the toilet they develop urinary infections" (A-Te-W-1)*. This happens due to the lack of attention paid to marginalised communities, *"they also don't have a voice, either by choice or by design, or by systemic failure" (N-De-W-3).*

Due to the non-mandatory enforcement of the guidance, government engineers in charge of infrastructure design are disregarding the notes *"I think for planning and designing any facility we don't need any gender specific perspective" (G-De-M-1)*, and there is additional issues trying to ensure when guidance is followed it uses more than one instance of participatory planning, *"So you got your active part in the planning, you are active part in a dividing and extracting out the livelihood activities, what more do you want?" (G-Te-M-1).*

The gender guidance for SBM is innovative in theory; national guidance that identifies key pathways for gender to be mainstreamed in infrastructure delivery. However their use is neither monitored nor prioritised:

"To be very honest, my last six years I've never used them. I've called up to say, hey, so these guidelines, this is great, tell me more, where can I get more money in order to implement some of these ideas? But who do I talk to, do you have an agency who could help us? I've not come across any such" (N-De-W-3)

"Honestly, these are guidelines provided by the national government. On ground, state level down, one doesn't hear of them – they have no practical listing. But I honestly, yes, we are aware of these guidelines, but in practice I haven't seen those translate into anything." (Participant A: PFGD – De)

"Our experience over the last five years pretty much has been that just because the government has signed, it is one guideline which doesn't have any real mandate. It doesn't seem to matter" (Participant A: PFGD – TN)

The evidence shows that guidance is curated and remains unused. The following section categorised failure modes preventing gender guidance uptake and usage to create transformational facilities, using the SI policy framework.

5.4.2 Using the System of Innovation Policy Framework

The adapted SI policy framework identifies the actors and rules for which there is a failure mode that is preventing gender incorporation, which if addressed, could have led to true

innovation. Inductive themes were identified in the 27 transcripts which were then categorised into the SI Framework. Table 12 summarises the spread of failure modes across the framework. The challenges noted by participants were categorised according to the Actor most closely aligned to it. In some cases, challenges may have overlapped (e.g. Policy Design in Institutional and Interaction Failure), in this case the actor assigned is the one closest to the core of the challenge (e.g. Policy Design not accounting for dissemination or organisational coordination).

Table 12 - Quantity of Failure modes in line with Gender Equality outcomes with Adapted SI Policy Framework for Qualitative Analysis (Klein Woolthuis et al., 2005)

Actor / Rule	Society	Organisation	Individual
Infrastructural Failure:	- Population exclusion (3) - Patriarchal Structures (3)	- Government Blindness (1) - Donor Conflict (1) - Workplace exclusion (1)	- Inadequate Facilities (11)
Institutional Failure:	- Attitude/culture (1)	- Accountability (10) - Administration (5) - Funding (14) - Informal Settlements (3) - Ministry Coordination (8) - Monitoring (9) - Policy Design (14)	- Personal Mandates (4)
Interaction Failure:	- Lack of awareness of issues outside of class (1) - Community Platforms (2)	- Dissemination (8) - Failure to be critical (7) - Joint planning efforts (8)	
Capabilities Failure:	- Community Ownership (4) - Taboos/Stigma (9)	- Interpretation of guidance (5)	- Denial of reality (7) - Power imbalance (5) - Work Load (5)

(x) = number of participants that discussed a particular theme

Figure 4 displays the quantities of these discussions in which participants highlighted thematic challenges. It demonstrates that the predominant Actor responsible for failure is Organisation, and within this, the Rule for system failure occurs most frequently at an institutional level.

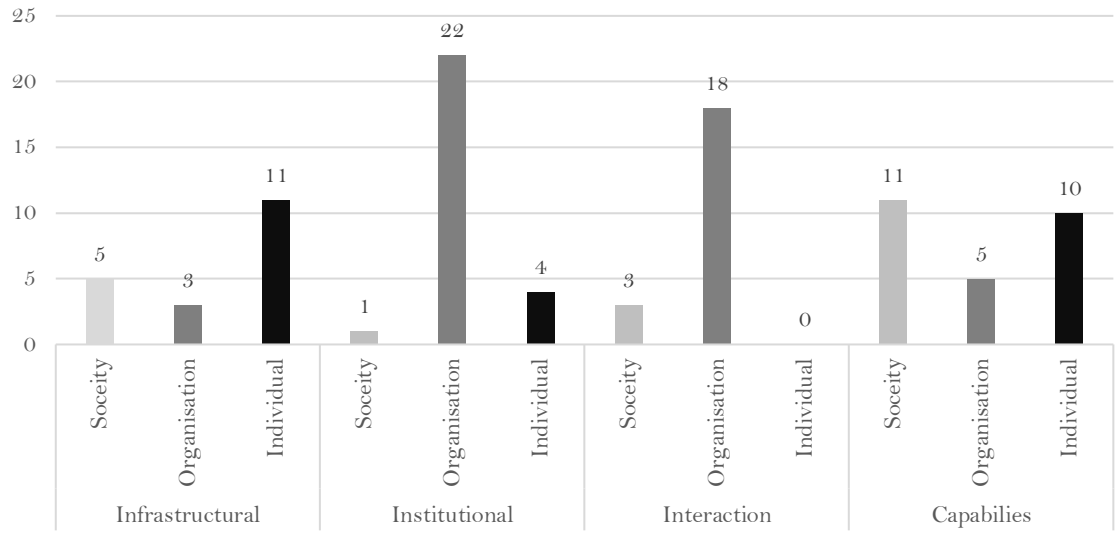

Figure 4 - Visual Representation of Thematic Challenges identified by discrete Participants, and categorised according to the SI Framework.

Infrastructural Failure

Society

Patriarchal structures and traditionally male-dominated spaces such as engineering continue to cause harm to those wanting to create safe feminist spaces. Experiences shared from women in practitioner interviews stated male-centric bodies create barriers for gender sensitive planning and implementation, due to their misunderstanding and avoidance of guideline use.

"Engineers plan cities. Men plan cities. Men are engineers and engineers plan cities. So, it's a male centric version of how sanitation is understood" (N-De-W-1)

"Constructers are men, people who earn the money are men, people who will take the loan for the toilets are usually men; it's very male centric" (N-De-W-3)

"These are engineering departments, right? What is the composition of the engineering department? They are all men. Can they take those guidelines ahead?" (Participant A: PFGD – De)

When identifying the barriers to gender implementation, an intersectional approach is needed to ensure related social barriers have been identified. Gender is one part of someone's identity, another part is caste, which remains a discriminatory element of Indian society. While the SBM aimed to facilitate universal access to sanitation facilities, it did not prioritise addressing

how caste and gender intersect to influence service accessibility. In particular, the geography of caste and how it directly affects people's access to services.

"It's all very important to always when we talk of settlements, of how settlements are, a lot of the villages, you will have the marginalised communities on the peripheries or in geographically difficult areas. Whether you talk about WASH services, health services, education services, a lot of them are in the centre of the village where your comparatively higher caste will stay. So, their access to this will always be a challenge. Even if the physical distance may be less, the social distance will be much higher still" (Participant A: PFGD – De)

One interviewee shared an experience (that was said to be common), that when he had built facilities in predominantly lower caste areas, that he would *"take a lot of heat from the higher caste population, 'why are you doing this here?'" (N-TN-M-1).*

Organisation

Although the SBM sought to eliminate open defecation through the design and implementation of private and public sanitation facilities, the attention to workspace facilities was severely missing. Participants shared experiences relating to the lack of attention paid to gender in the public space, *"a lot of women don't have access to toilets while they work. It ranges from all kinds of vendors to migrant labours to just a whole range. Nobody talks about it, even in the whole discourse of public toilet and community toilets" (Participant A: PFGD – TN).* Even within work environments where participants were designing sanitation systems, at times they themselves did not have useable facilities; *"I was stationed in a government office. I was reporting to a joint secretary. The toilet available for us was so horrible that I never used it. I learnt to hold it in for eight to 10 hours every day" (N-De-W-2).*

Unintended hardships can be created through apparent innovation. After getting an on-site toilet, one practitioner described a recent encounter with a program beneficiary who wanted to highlight the additional burden her new facility had given her; now she had this facility, she had gained the task of collecting additional water. Although implementation of sanitation facilities is frequently done to alleviate burdens on individuals, it can at times have the opposite effect. *"I can manage with just a bottle of water in the fields. Here, I have to fetch three buckets of water" (Participant B: PFGD – De).* The focus on creating infrastructure and meeting ODF targets led to added workload for women that was unrecognised and unaccounted for in planning and implementation of programs. In this instance the guideline is not helpful as it fails to recognise the potential to add hardships.

"I remember when we were understanding village program, it was implemented by the village head, he was like 'there's no way anybody gets to escape, everybody has to build a toilet'. But when I started interviewing some women about eight months after these toilets were built, these women hated it. Now with the toilet, it was the woman's burden to bring in far more water to be able to use and clean the toilet" (N-De-W-2)

When designing facilities, even if guidelines are being followed, disconnect can be seen between donor, government, and implementor. One participant specified frustration with instances of "*immature*" donors trying to design their own programs that failed to meet the requirements of gender guidance but result in lost funding due to inability of government/implementor to convince donors of the need for gender sensitive planning *(N-Te-M-1).*

Individual

Infrastructural discrimination based on gender is seen across state lines. This could be attributed to the lack of focus on the social factors that directly affect usage of facilities such as time, money and safety.

> *"Men's toilets would be open early in the morning, whereas women toilets are only opening at around nine o'clock, and these women's toilets would be closed early" (N-De-M-1).*

> *"A woman needs a cubicle, a man can urinate in the open and urinals, right? Urinals are free. Cubicles in public toilets are priced. So, who is the one who's paying? It is the woman who's paying?" (N-De-W-1)*

> *"It's always men who use public toilet and not the women. Women don't find it safe to access the public toilet and the approach to the toilet, it's not private so they don't have privacy" (N-De-W-5)*

Even when there are facilities that technically are available, often they have been designed without any reference to best practice guides or thoughts from the communities that need to use them; creating facilities that are at times unusable.

> *"Colossal mistakes start right from the beginning where those toilets are so tiny. I've gone to these villages, where they were like, 'madam, would you mind stepping into this toilet and tell us would you use it?', and it barely had space to fit my shoulders in" (N-De-W-2)*

> *"Most of us can technically access toilets, but we used to struggle to do it with dignity, and at times may have soiled ourselves. Even if there was a toilet, there would often be no handrail, low lighting… things like this which make it easier for us all" (Elderly Woman 1: FGD Differently Abled Group)*

Institutional Failure

Society

The culture of an institution can drive or stagnate guideline uptake, and at the beginning of the SBM period, it was widely accepted that *"the team that was there for the first two years, did not really believe that the mission could even be done" (N-De-W-4).* There were reservations about how and why

SBM would be different from previous campaigns, *"if you look at the history of India, we have such programs happening every few years. Even TSC [Total Sanitation Campaign] wanted to build toilets for all. Everyone says toilets for all" (N-De-W-4)*, and so this could explain the relatively slow start to SBM including the lack of attention paid to gender in these first years.

Organisation

Accountability mechanisms are missing from gender guidance across SBM. This creates several different manifestations of avoidance. Firstly, those who incorrectly believe all the elements mentioned across the gender guidance are encapsulated in documents they already use: *"It is already there in the Panchayati Raj Act [an act establishing village governance principles]" (G-Te-M-1)*. Secondly there is no pressure or binding contacts to ensure their usage: *"there is no point – no push or no pressure from the government to work on gender on the ground" (N-Ra-M-1) / "guidelines are published, government really accept them; accept them in the sense that they put their logos and they accept to circulate it. But in most cases, those are actually not executed. So, a state government – national government can only publish guidelines. It does not bind them legally to the state government that they really follow or not (N-De-M-1).*

The avoidance was most evident in programs across Telangana where government officers stated that they did not need to use their own guidance because other organisations provided clearer direction:

> *"The government officials said, your designs are good, we'll just follow your designs. It seems to work better. It's clear, simple, et cetera. It seems to work for us. So that's a way of ensuring that the guidelines are eventually followed. So, I think the government also knows that this happens. They're not particularly so worried. They know the guidelines are not being followed" (N-Te-M-1)*

The lack of accountability can lead to civil society proactively assuming responsibility. One of the Rajasthani focus groups specified wanting to build a community toilet block, and the lack of government involvement initially left room for the community to design their own facility. The women's group utilised gender guidance to design a facility that surpassed previous standard design options; *"we mobilised government to build a toilet for our area, using designs we created ourselves" (Elderly Woman 1: FGD Women's Self Help Group 2).*

Administration plays a substantial part in how government functions with respect to implementing the national missions. How the Indian government currently functions is tied to British colonial legacies; *"colonial administration brought in a lot of new ideas, but in a half-cooked manner. Because they only looked at what is required for running the system there rather than improving the lives here" (N-De-M-1).* By failing to think holistically, the lingering effect of the governance structures continue to hinder the progress during implementation of missions, focusing on physical infrastructure over continued use and maintenance.

The additional administration hurdle is the prioritisation of targets and the competition between states and districts; *"I see that in our admission phase 1, there is literally a rat race where every district or state competed to declare that their district of the state is open defecation free. In that rat race a lot of mistakes were committed" (N-De-W-5).* In wanting to 'beat' the other states, the minimal standards were used, leaving no room for additional conversations on integrating gender guidance.

In addition to challenges with accountability and administration, funding proved to be the largest hurdle to use of the gender guidance alongside SBM. There is no tangible finance available to implement the ideas shown in the gender guidance;

"They are just on pen and paper - the money is not being paid on them" (A-Te-M-1)

"You make the provisional guidelines, but you don't make them provisional in the finance" (N-De-M-2)

"In terms of policy, it is written clearly, but there is no extra funding path for these features (N-De-W-3)

"I've never used them. I've called up to say, hey, so these guidelines, this is great, tell me more, where can I get more money in order to implement some of these ideas? I've not come across any such" (N-De-W-3)

One explanation for this is the choice of language. *"The guideline was very careful about using the word that they use for the money that was given, okay? The term that is used in the WASH guidelines is incentive" (N-De-W-4)*, it is agreed by current and previous government employees that this document was intended to *"give support to likeminded people at the grass roots, to give them a basis to kind of fight the good fight" (N-De-W-4)*, therefore it was not intended to have universal use.

In relation to funding, corruption was noted as a barrier both by government and non-government participants. In some instances, there was evidence of officials choosing to spend sanitation budget on personal gains instead; *"The good things are not implemented and bad things are implemented. Because we have a limited fund. We have to spend that fund only. That fund can be implemented for a good cause, that fund can be implemented for my personal aspiration cause. I wanted a big room for me here. So I got a big room for me here. Maybe irrespective of if you need toilet facilities in public places" (G-De-M-1).* In these instances, even when funding is sourced, there are still barriers for communities getting the funds they deserve; *"The last and final word I would say is corruption. That plays the biggest – you might have come across some news where a big scam on toilets where the money is sent, but not received by the beneficiaries" (N-TN-M-1).* If there were funds available to integrate gender guidance into sanitation implementation, measures must be in place to ensure those funds could only be used on gender guidance for them not to be redistributed *(as seen here, and in the gender practitioners perspectives from the survey responses 3.6.4).*

In order for innovation to be seen, and intersectional perspectives on identity to be understood, ministries with joint priorities should be working together. Sanitation specifically falls under the Ministry of Jal Shakti (*formerly Ministry of Water Resources, River Development & Ganga Rejuvenation and the Ministry of Drinking Water and Sanitation during SBM I*) for the Grameen component, and Ministry of Housing and Urban Affairs for the urban component.

However, the Ministries of Women and Child Development, Social Justice and Empowerment, Education, Panchayati Raj [*village governance*], Health and Family Welfare, and Environment, Forest and Climate Change to name a few are also often all involved in the curation of guidance and policy documents. The reality of implementation tells a different story.

"In most of the times, really they fail to come together" (N-De-M-2)

"The ministry that's responsible for it becomes a very territorial, it's a space where you don't get inputs from anybody else. In fact, Ministry of Housing and Urban Affairs, which is urban sanitation, does not talk as often to Drinking, Jal Shakti. They're doing the same exact thing, different areas. The have the same programs, started at the same time, similar funding. They're talking to the same states. They still don't talk to each other, not genuinely" (N-De-W-3)

In one incidence, an NGO had to bring ministries together to tell them about their joint project; *"We had to get two departments together and say, 'this department is doing this, and you are doing this, and it would be really great if both people talk to each other'. Then they were like of course this is great. You can help us. We can help you." (Participant A: PFGD – TN).* There is a tendency for ministry coordination to limit collaboration after national guidance is written, preventing this would aid the execution of programs to bring multiple perspectives and differing priorities.

Gender guidance usage was not monitored, neither were social and technical aspects of sanitation that relate to gender. The monitoring of ODF failed to capture the usage of built facilities, therefore social dynamics tied into this were excluded through the metrics of physical toilets only; *"They are monitoring how many toilets have been constructed, not whether you have become open defecation free" (N-De-M-2).* Secondly, the data that was collected was often seen to be unreliable; *"The thing about SBM data is almost all of it is not believable. That's because a lot of it is self-reporting" (Participant B: PFGD – TN) / "When you have something which is too politically driven and with no scope of learning or reflection, you will have data which will be 100 percent as per those things; the credibility of that is really questionable" (Participant B: PFGD – De).*

Finally, policy design was a key barrier for the success of innovation. Prioritisation of infrastructure over usage not only impacted monitoring, but the focus of the mission generally; *"The problem was the swift movement of the mission, automatically their focus was into the conception part of it rather than the softer side. A hardware-focused mission, both in the urban and rural context" (N-De-M-1).* On paper, the gender guidance for SBM has the potential to be transformative, *"I think the intention was really good. I mean, as a guideline or reformed program" (N-De-M-2).* But without clear and practical guidance for implementation, the intention can fail to manifest; *"A lot of written policies and written issues, they want changes in a very transformational way. If you read through the guidelines, it will be politically more than 100 per cent correct. But when it comes to action or when it comes to translating that policy into action, at national level to provincial level to district level to subdistrict level, to panchayat… quite often in India we miss the implementation framework" (N-De-M-1).*

Individual

An individual's personal mandate informs the way someone approaches their work. Government employees were often those directly implementing SBM, so without vested interest in the take-up of the gender guidance, the documents remained unused.

"So many programs themselves don't succeed with or without the gender angle because people weren't driving them to care enough" (N-De-W-4)

"The action part of it differs from place to place and leadership, person to person. Some wanted to respond to it immediately, some want to ignore it" (N-TN-M-2)

"I think it's really a question of people taking ownership. We've met some fabulous government officers on the ground, and we've seen how much difference it makes" (Participant A: PFGD – TN)

Additionally, once a civil servant has entered the Indian Government stream, there is evidence that the intrinsic job security that is granted creates stagnation in work that does not coincide with pushing the boundaries of resources to create innovative programs; *"People don't really care beyond a point. Everyone has job security. They don't have to deliver on outcomes to secure their jobs. So there's really no encouragement for them to care about additional program elements" (N-De-W-4).*

Interaction Failure

Society

A gap exists between rich policy makers, and poor communities with limited access to WASH, especially gender sensitive WASH. Blindness to societal problems was a concern highlighted by NGO workers, which was then shown through Government employees dismissal of gendered challenges such as Transgender access and water fetching challenges.

"The rich are not worried about it. Those influential people are not seeing the actual problems" (N-De-M-1)

"I have not heard in my life that Transgender is discriminated at all" (G-De-M-2)

"Forgotten the days of collecting water – it is history now. No one goes out to collect water, no female ever goes out to collect water" (G-Te-W-2)

"But there is an issue of, you know, the issue of non availability of water due to social issues. It may exist, but it's very, very microscopic or minority. It's really a minor issue" (G-TN-M-1)

Privilege is therefore widening an existing divide, and hindering implementors and policy makers ability to connect; *"most policies, I won't say all of them, but most policies does not have the end user point of view or benefit. The benefits are kept in mind from somebody who comes from privilege and has never really lived through the problem themselves" (N-De-W-2).*

In order for society to make meaningful change, platforms need to be created that allow for community's ideas, thoughts and critiques to be genuinely heard and incorporated into guidance; *"People are speaking up but they are not getting proper platforms to actually speak." (N-Ra-M-1) / "Is my local authority giving me those platforms to raise my concerns, raise my worries, raise my needs?" (N-De-W-3).*

Organisation

There are multiple instances of successful intent to plan gender guidance use across government and civil society*; "these guidances are actually prepared from a lot of experience from the field. To get them accepted, we actually have to pilot them, show the successes, demonstrate the successes" (N-De-W-5).* However, when it comes to revising policy and programs, giving critique or feedback, the mechanisms that enabled collaboration seem to breakdown; *"It has worked to a certain extent, yes, but I wouldn't tell you that all the recommendations that we give has worked" (A-Te-W-1).*

A failure to be self-critical is seen across ministries in government;

"Government people, they will say that whatever they are doing is good" (A-Te-W-2)

"Self-awareness, it's not something I would say this government has" (N-De-W-3)

"They don't want to reveal anything, they don't want to take part of any discussions." (N-Te-W-1)

"The culture of listening to criticism is completely gone or is it on its way out. It has to be packaged and couched and delivered in a certain way for it to actually make any impact" (N-Te-M-1)

This failure to engage in discussion around potential failure has only increased in the last decade; *"This narrative wasn't there until seven or eight years ago. But this narrative has changed recently. But then the narrative of many things that the ostrich effect has really taken shape and form in India now. 'Ah, there's no problem. There is absolutely no problem. If we say there's no problem, then there's no problem'. I mean, I'm not sure why the political will wants to deny something that's very clearly a reality, but this affects things beyond the open defecation problem, but I think being considered, it hopefully - maybe the will is that pretending to be open defecation free gets the country a higher status in the world's scheme of being considered a serious country" (N-De-W-2).* This dismissal and avoidance to engage was seen in government interviews when participants continually changed the subject or deflected questions when asked about improvements to increase gender guidance usability.

The most substantial organisational interaction failure mode is dissemination. For practitioners to use gender guidance to improve SBM outcomes they need to know where to find it, and how to use it. Swachh Bharat generally achieved huge media coverage with ads, radio shows, WhatsApp groups *(N-De-W-4; N-TN-M-1)* and is an incredibly well-known program across the country, *"Swachh Bharat, everyone knows. They say that all the money has been spent on, that's a criticism of the government, that some media and communication is what the government is spending*

on. But everyone got to know what it was all aimed at. So that is something worth giving credit. (Participant B: PFGD – De).

Unfortunately, gender guidance was not equally well circulated; *"There were many local governments who were willing to work on this, but they actually didn't know that what really female-friendly toilet looked like. What are the designs, actually?" (N-De-M-2).* There is also misinterpretation of gender guidance and curation of gender-sensitive facilities, with practitioners experiencing implementing engineers incorrectly assuming the policies solely focus on women, *"men are being left out because they think focus is on women and all adaptations were about women's safety, et cetera, so men thought the sanitation programme is something that doesn't apply to them" (N-De-M-1).*

Even when they were circulated the tens of pages of technical information was often overwhelming, and simpler forms of sharing were thought to be more accessible; *"I think even for English and Hindi sometimes these documents need to be really simplified, even for bureaucrats. Sometimes you just need a one pager with respect to what is the intention, what needs to be done and this thing" (Participant A: PFGD – De).*

Dissemination of guidance, and of rights, can be a powerful motivator of change. Translation of said guidance is one way to promote uptake to ensure a wider reach. High level government documentation is predominantly in English *(N-De-W-3)*, yet guides need to be in *"simple Hindi and other local languages, with pictorial language" (N-De-M-2).* Time also needs to be taken when conveying messages down the chain of implementation; *"by the time the state level understood it and extract them from the policy and sends back to the districts level or the urban level, local body level. The whole idea of understanding that particular policy gets diluted" (N-Ra-M-1).*

Capabilities Failure

Society

De-stigmatising WASH is a key factor in increasing the success of guidance usage. Taboo and stigma drive decisions around WASH, mainly creating silence where there should be active effort to break down harmful barriers in sanitation systems. Without acknowledging the importance of sanitation, people are getting left behind, and those people are often women:

*"I was once doing WASH surveys in Punjab with really rich farmers, like really rich. Huge house, hectares of farmland. So, I saw some of the men getting into a Merc [Mercedes car] with cans of water. So, I'm like, they're clearly not going to irrigate hectares. So, I asked them, 'what are they going to do?'… They were going to defecate in the field! So, they're driving their Mercs to go into the field to do their job. Yeah. At that point, I gave up. … So many women, all of them are menstruating, all of them have bathroom needs. You guys have five German cars, never mind what your net worth actually might be worth, how can you not build a **** toilet?" (N-De-W-2)*

Organisation

Interpretation of guidelines differs across states and ministries. Guidance states 100% of people should be ODF, with access to sanitation. Yet across 3 states each of the following government employees counted 100% differently. The difference in interpretation allows for at least tactical monitoring, and at worst, active avoidance of marginalised communities;

"The philosophy is no one is left out, failure of 100% coverage will break my heart" (G-De-M-2)

"We have to look at 99%, it doesn't mean that 100% is covered, there will be people left out" (G-Te-M-1)

"There may be issues of some people getting left out, mainly because of emergence [new populations moving into areas already registered as ODF]" (G-TN-M-1)

The people that have been, and will be missed from this '100%' are those that should be served by the gender guidelines; if gender guidance informed implementation consistently, all members of a community should have been served equally. There is also misinterpretation of gender inclusion, often solely focusing on women, *"men are being left out because the focus is on women and all adaptations were about women's safety, et cetera, so men thought the sanitation programme is something that doesn't apply to them" (N-De-M-1).*

Individual

Power imbalances need to be addressed and considered with relation to gender and sanitation. There is active effort to increase women's leadership roles, especially in local village government at Gram Panchayat level, but without social accommodations that create a safe space, *"of the elected representatives who are there, it was most often their husbands representing them" (Participant A: PFGD – De).* Then, even if women are able to get to positions of power as engineers and officers, the power imbalance in these positions remains evident; *"The views which are given by the lady officer will not be taken as easily as the views given by the male officer" (G-Te-W-1) / "I mean, I've spoken to female engineers who've been told that you just wasted a man's seat" (N-De-W-2).* A woman's capability is determined by the power she is allowed to hold.

The implementation of WASH facilities is intended to lead to improved outcomes for all. However, when programs are implemented without community involvement, unintended negative consequences can be seen; *"People would say "we've saved you two hours a day", but that is the only time women have to socialise is when they are going into the fields. Her only time for leisure or not being under someone's watchful eye" (N-De-W-2).*

An individual's capacity for innovation is also driven by their willingness to be uncomfortable and challenge their own biases; *"one thing I also noticed a lot of discomfort talking about it, even with top level bureaucrats, there's a lot of discomfort talking about floating population, migrant populations, sex workers, and Transgender persons. 1. It is their own personal discomfort, 2. is they don't know where the government of*

India is standing, so it's hard for people to take those decisions comfortably, of course as a result" (N-De-W-3). Without direct orders of the governmental 'stance' and willingness to understand marginalised communities, an individual's capability stalls.

5.5 DISCUSSION:

The availability of gender guidance for the Swachh Bharat Mission did not create a focus on gender equity outcomes during the Phase I implementation. The mission and associated guidance fail to consider the hurdles for civil society that exist to disallow full usage, and evidence suggests there was limited intention to actively use these documents in implementation. Although tens of WASH professionals exist that want to work on actively advancing gender equality outcomes, often organisational challenges prevent this.

The research demonstrated that 'organisation' was the key actor preventing incorporation of gender guidance in the SBM, with 14 different challenges noted across 25 of 27 discussions, which were present across all failure modes (infrastructural, institutional, interaction, capabilities). Gender guidance was created at a national level, with involvement from multiple ministries, yet cross-ministry coordination as shown in these interviews is a rare occurrence when moving beyond the initial design of programs; *"They still don't talk to each other, not genuinely" (N-De-W-3).* Indian bureaucracy creates challenges with Ministry coordination *(Sneha P. et al., 2021),* yet these policy challenges are not India specific. Without coordination, civil servant interaction and commonality in understanding challenges, barriers in policy implementation will continue *(Peters, 2018).*

Even with coordination, the capacity of government officers could be questioned. The former Government of India Secretary leading Swachh Bharat, Parameswaran Iyer notes key challenges of the structure of the Indian Civil service in the way that government employees are trained in his memoir:

> *"The system does not encourage post-DM [district magistrate] job allocations to specific sectors based on aptitude or interest of the officer. As a result the officer tends to become a 'generalist' of sorts after the DM tenure, and could very well end up with postings in varied departments… without ever actually knowing much about these sectors. Given than most IAS [Indian Administrative Service] officers are involved with policy making at a senior level, it is important to develop some level of expertise and experience of the sector to be truly effective." (Iyer, 2021, p.69-70)*

The generalist approach to IAS structure could fail to produce officers which have the skillset required to understand the positions they gain. Perhaps introducing inclusion criteria such as

gender, could be added formally so that all IAS officers might have a base level knowledge of social inclusion. This could be used across all ministry positions, and may help to avoid the dismissive attitudes present in this study when government employees spoke about incorporating gender into their programs.

Tensions around the feasibility of the program created wariness, seen by interviewees in this study *"the team that was there for the first two years, did not really believe that the mission could even be done" (N-De-W-4)*, and the program's lead, Iyer *"when teams are faced with a seemingly insurmountable target…they tend to subconsciously dismiss the targets as unachievable… I could understand the hesitation in the team I inherited" (Iyer, 2021, p. 137)*. When officers have limited specific experience, and major hesitation, it can be understood why government officers were failing to address additional targets beyond their basic scope. If employees were dismissive of the key elements of the program, additional elements such as the gender guidance was bound to be lost.

In addition to government coordination and capacity of officers, there is an accountability barrier. The gender guidance is national, yet cooperative federalism in India leads to State driven programs and policies. Without mandatory notice from central government, this guidance is only used if the state dictates its usage. Disconnect can be seen between national and state level governance, with centralisation and decentralisation of programs often occurring in tandem *(Chandravanshi, 2021)*.

Limited dissemination of national guidance led to low awareness of existence, and at a state level, uncertainty of the ownership of this guidance. There were also misconceptions around the content of gender guidance itself, with government interviewees claiming all the information from the gender guidance was already in pre-existing documentation: *"It is already there in the Panchayati Raj Act" (G-Te-M-1)*. These documents do not contain the same information, but raises a question around the intention behind the statement – are the gender policies performative in nature if there is no commitment to understand or use the documentation. This links back to the ideas of extraversion discussed in section 3.8, where this is active avoidance for using gender guidance.

Due to limited ownership, funding channels were not open, and nor was there interaction to discuss the process of mainstreaming the guidance. Even when professionals wanted to create gender inclusive WASH practices, they were advised it was beyond their scope. Without accountability, gender guidance will remain unused by the majority, even where there are personnel willing to engage.

One of the key driving messages for the SBM was the need for women's dignity. Media campaigns saw the rise of messaging around building toilets to protect women and give them *additional freedoms*. This was particularly evident in the 2017 critically acclaimed "Toilet: Ek Prem Katha" [Toilet: A love Story] *(2017)*, a story centring around a husband's struggles to

build a toilet for his new wife. Although potentially well-meaning, the focus on men building facilities for the sake of women's dignity has been criticised as it fails to account for others dignity and signifies that men are the custodians for women's dignity, as noted by one of the practitioners, *"it's not exactly a feminist classic" (N-De-W-4).* This messaging was highlighted as a barrier in 2017 government correspondence following practitioner critiques of the mission implementation *(Ministry of Drinking Water and Sanitation, 2017a)*, and suggested a need for inclusive language associated with the program. This showed active self critique, and demonstrated national level intention to dismantle harmful discriminatory language. However due to the limited accountability previously mentioned, professionals weren't required to use the guidance, so the potentially transformative practices were predominantly unused.

In addition to critique over original messaging, the target audiences and gender considerations in the guidance at a policy level failed to account for India's rich history of identities. India is currently one of only 16 countries globally that legally recognise more than two genders *(Equaldex, 2023)*, and the Transgender Persons (Protection of Rights) Act, 2019 (Ministry of Social Justice and Welfare *Transgender Persons (Protection of Rights) Act, 2019; Gosh, 2014)* adds theoretical protections for minority gender identities. The policy has received critiques for its language choices and lack of guidance to enforce these new rights *(Bhattacharya et al., 2022)*, but the existence at all is an important step in the pathway to recognition. However, neither the Transgender Act of 2019, nor any of the Swachh Bharat guidance mention the specific water and sanitation requirements or barriers for these communities. It was not until October 2023 when the National Human Rights Commission released the 'Advisory for ensuring the welfare of Transgender Persons', which stated *"All public places should have separate washrooms for Transgenders" (NHRC, 2023, p.3).* Transgender persons often struggle to access and use sanitation due to technical and social barriers *(Boyce, P. et al., 2018)*, and lack of government awareness creates further alienation of the community. Even within this sample of WASH professionals working on gender, the predominant response to Transgender inclusive sanitation was to draw blank; *"even I am pretty ignorant on what might be the case for them, how are they managing. How are people who do not identify either or if there's only one single, how would you even manage?" (N-De-W-3).* This was also true of all government participants who hypocritically stated gender equality was a priority, but specified active provisions for gender diverse populations were not part of their work, nor did they know who to identify that did work on these factors.

It cannot be disregarded that the SBM had a huge impact on sanitation programming in India, partly due to the ambitious targets, continuous monitoring and active rewards for fulfilling goals *(Curtis, 2019).* Yet the focus on high level output-based targets (the amount of toilets created), meant contextual implementation was missing. If the mission and associated goals were more nuanced and reflected outcome-based goals (e.g. amount of people using new

facilities), perhaps gender sensitivity would have been a bigger factor in planning and implementation.

The Swachh Survekshan was used in this research to choose areas of best practice. It identified that commended areas may meet the output-based requirements, but this does not directly lead to additional positive outcomes beyond the targets. If the survey used additional questions to assess inclusive practices (gender sensitive facilities, disability access), perhaps the gender guidance would have been more actively used as there would be monitoring of social outcomes in addition to technical outputs. Perhaps an additional category of 'inclusive' city should be added to specifically target social attributes of sanitation programs as the Swachh Survekshan continues to document national cleanliness.

This research demonstrates that challenges present with the Total Sanitation Campaign were also present upon completion of SMB in 2019; "*implementation was unaligned with the programme's guiding principles*" *(Hueso and Bell, 2013, p.1001)*. Ensuring a country is ODF and that everyone has 100% sanitation coverage is about more than creating toilets. Establishing transformative guidance and then leaving it to be unread and unused is both a disservice to its curation, and to the people it could be used to help. Many professionals in this work stated the importance and priority of gender equality programming but without the ability to address systematic challenges, they were unable to create productive change.

Building on the Adapted gender-integration framework from Chapter III *(MacArthur et al., 2023)*, the challenges identified in this research echo prior identified barriers, and press further to understand the source of the issues.

5.6 CONCLUSION:

These interviews and focus groups displayed the failure modes that prevent the idealised innovation of the Swachh Bharat Mission through active use of the associated Gender Guidance. Although it is possible the mobilising power created due to the simplicity of the key outputs drove change, the lack of attention towards active usage of the gender guidance created many unusable and inaccessible facilities.

Identification for policy roadblocks help to pinpoint where there is room for improvement in the delivery and implementation of gender equity outcomes. This research suggested the main pathway to improved outcomes is through attention to accountability, government coordination, increased dissemination and active inclusion of diverse communities. A transformative gender policy document has limited use without the associated funding, monitoring and prioritisation.

In order to progress towards gender equity outcomes, gender cannot be seen as an add-on to existing programs, or an optional extra if there is funding available. Paying attention to gender equality improves outcomes for all and should be mainstreamed throughout the design and implementation stages to ensure gender is considered at all stages. The monitoring of social outcomes in addition to technical outputs could see increased attention towards these aspects.

5.7 Study Ramifications: Subsequent Exploration

This study shows that although there was active inclusion of gender at the national policy level, yet lived experience at community level demonstrated that this did not percolate down to impact the ground reality. Multiple usability failures through funding, dissemination, accountability, and narrow understandings of gender amongst government officials decreased the potential impact the programs could have had.

These narrow understandings that assumed gender was solely about women excluded millions of people from interacting with, and helping to form gender-sensitive policy. In the first empirical study for this PhD (chapter 3), survey respondents recorded discord between idealised inclusion and the reality of inclusion for LGBTQ+ persons. As shown in section 4.2, India has a diverse and rich history of gender identity, yet this chapter highlights the exclusion of the Queer community, in particular Transgender voices and their needs.

The following study therefore explores the reality of sanitation access for the communities that are excluded from mainstream programming in India.

6 CHAPTER VI

REALITIES OF SANITATION ACCESS FOR QUEER PEOPLE

6.1 CHAPTER OUTLINE

Active inclusion of gender diversity was not found during SBM Phase I, the program primarily explored how cisgender women could be involved, discounting all men, transgender women, and those with non-binary identities. As shown in section 5.4.1, implementors stated that they were unaware of discrimination against Transgender individuals and were unfamiliar with the sanitation needs of gender diverse persons. This chapter documented government and community perceptions of gender diverse access to sanitation, and explored the changes needing to be made to increase safe access to facilities.

Interviews with those at the Ministry of Social Justice and Empowerment (the nodal agency for Transgender individuals) were conducted to investigate the curation and delivery of gender diverse programs, and their involvement with the Swachh Bharat Mission (SBM). Activists and academics were also interviewed to identify differences in the gender discourse. Focus groups comprising Queer people were conducted to ensure their voices were centred in these discussions, and to determine whether the challenges as perceived by non-Queer research informants reflected true barriers for Queer people.

Queer is the preferred terminology used by the participants in this research, therefore will be used when discussing the collective community (as opposed to LGBTQ+ or gender and sexual diverse/minorities). Chapter 5 primarily discussed Transgender and gender diverse persons in relation to marginalised communities, but this chapter opens up to include other Queer identities, so the widening of terminology is preferred going forward.

Findings in the chapter agree with existing research that demonstrates a need for complex thinking that avoids homogenising gender diverse groups *(Boyce, P. et al., 2018)*, and builds on this to specify the need for greater attention to how social and technical challenges interlink around technical sanitation.

6.2 AIM OF STUDY

Limited knowledge exists that documents Queer experiences of sanitation globally. As the world strives to 'leave no one behind' in accordance with the SDGs, marginalised people need to be included in conversations around their access to basic services. Chapter 5 clearly documented the disconnect between intention and reality of gender inclusive programming in Swachh Bharat, and so this follow-up study investigates how the non-gender inclusive sanitation implementation affects a group of Queer people. Identifying barriers, success pathways and highlighting participant recommendations form the key components of this study.

6.3 METHOD:

6.3.1 Interview and Focus Group Methodology

This study explored the participant perceptions around access to sanitation. The research documented queer experiences of sanitation access, with a focus on Transgender women's experiences and the perceptions of people working on improving Transgender sanitation access. Key Informant Interview (KIIs) were conducted to give an overview of national implementation of sanitation policies and how the Queer community is considered at a governmental level. The research involved interviews with government, academia, and activists to document existing programs, implementation of inclusive practices and the future direction of the sector. Focus Group Discussions (FGDs) then gave a grassroots look what sanitation means to a group of Queer persons, to incorporate voices of the Queer community, in addition to those speaking on their behalf in key informant interviews. There is a focus on discursive quotations, which centred the investigation in community voice, which is identified to enable "*the expression of minority voices that might otherwise be silenced*" *(Boyce, P et al., 2021, p. 74).*

Both KIIs and FGDs were conducted in a way which favoured open discussion; qualitative and discursive discussions with limited interjection by facilitators were favoured to ensure sessions were participant-led. Especially in FGDs, the participants were encouraged to share stories and interact with each other to identify commonality of experiences and rationale for difference of opinions. The Participant Information Sheet (Appendix B.3) was available to both KII and FGD participants prior to conversations, interview prompt questions were available to KIIs if requested, but the FGD guide was not available to participants before the conversation to promote organic conversation. The interview guide was developed with [available in Appendix D.3]

KIIs took place through a mix of online and face-to-face sessions, and FGDs were conducted in-person with a translator and research partner, with the lead researcher joining online at request of the participants. All KIIs were conducted in English, the first FGD was conducted entirely in Hindi with Bokam[11] leading, then the second FGD was conducted partially in English (due to participant preference to speak directly to the lead researcher), and partially in Hindi for those preferring to remain in their first language. Some tension was present in the second FGD when some participants were unable to understand others in the group, but Bokam continually summarised English back to Hindi to attempt to bring the group continually together. For clarity, the translated quotes will be labelled 'Hindi'.

Checking of KII and FGD transcripts with participants was not completed (as in section 5.3.2) due to potential organisational dangers around publicising conversations had; participants critiquing government, or their own organisations could have faced negative ramifications if their transcripts were seen by peers and superiors.

All data for this study has been reported in accordance with the COREQ guidelines for processing qualitative research *(Tong et al., 2007)*[Appendix G.2].

6.3.2 Sampling and Recruitment

KIIs were selected purposively through key word searches on LinkedIn ('Transgender' or 'Queer' or 'LGBT' + location: India), Government of India profiles (Ministry of Social Justice and Empowerment, and NGO staff pages). A background in sanitation was not specified; as shown in the previous chapter, there was minimal overlap of people with a specialisation of gender diverse WASH. Therefore, a background in gender was prioritised, and a question was asked about prior experience of sanitation programs during planning stages to ensure all interviewees had some experience of integrating gender into sanitation projects when working on wider development projects. In addition to the final list of 6 interviewees, 17 other individuals were contacted for interview; six individuals did not respond, and eleven agreed in principle, but were unable to find time in their schedules. Participants were contacted via email or LinkedIn with an official request letter [Appendix E.3], to validate the study and demonstrate formality of the research.

To design the focus groups, the research needed an organisation or individual with extensive commitment and experience of gender diverse needs, who could co-design research questions and help lead discussions in multiple languages. The focus groups were originally to be held in-person in a shelter in Delhi (as suggested by one of the interviewees), however the original

[11] Ravikirankumar Bokam was the lead contact for the FGD work, and remains an active part of the results interpretation. He is listed on the cover of this work as a key guidance provider, and acted as a gatekeeper for the FGDs.

research partner for this study had to remove themselves from the work due to time constraints. Various other avenues (including four NGOs) were explored to speak directly to Queer people about sanitation. The resulting connection was formed through colleagues from the initial set of interviews in Chapter 5. Although the final organisation wishes to remain anonymous for fear of public critique of government programs that could lead to reduced funding (as noted in the thesis introductory remarks), they were irreplaceable in the curation of this study.

One independent researcher, Ravikirankumar Bokam, was invaluable to this work, acting as a community gatekeeper, focus group organiser, and lead translator for the FGDs. The FGDs were originally to be with gender diverse participants only, but Bokam advised that a richer discussion would be held with participants across the Queer community, as societal confusion and misunderstandings of gender and sexuality meant sexually diverse individuals may have had connected experiences to share. The final groups were formed from existing support groups, and those available on the days of the discussions included Transgender men, Transgender women and Gay men. The two FGDs were held with existing groups known to Bokam, to foster greater safety and familiarity between participants for discussing sensitive subjects.

6.3.3 Data Collection

Between February and October 2023, 20 participants shared experiences on sanitation design, usage and needs for queer populations, across individual interviews (6) and community focus groups (2 groups (14 people total)). In February and March, the lead researcher was based in Delhi, and was able to conduct discussions in person, or virtually if preferred by the interviewee. Between April and October, the lead researcher was based in the UK, so interviews were carried out virtually, and FGDs were attended virtually, but held in person with the facilitator. Participants were government personnel, academics, activists, and community members. Both FGDs and Interviews were carried out at a time suggested by participants and lasted between 30 minutes and 2 hours. Location for discussions were specified by the participant, and were either public cafes, or virtually from their homes. Where possible audio-recording of the participants was preferred and supplemented by research notes. If participants did not agree to recording, notes were made to summarise the conversation themes, and specific phrases were transcribed to ensure quotability of participants.

Tables 13 and 14 list the participant demographics.

Table 13 - Demographics of Key Informants

	Sector	State	Gender	Relationship	Approached	Where	Date	Recorded[13]
1	Government	Madhya Pradesh	Man	3rd	LinkedIn	Online	05.03.23	Yes
2	Government	Delhi	Woman	3rd	LinkedIn	Café	05.03.23	Yes
3	Academic	Karnataka	Woman	3rd	LinkedIn	Online	07.03.23	Yes
4	Activist	Delhi	Woman	3rd	LinkedIn	Café	09.03.23	Yes
5	Government	Delhi	Woman	3rd	Email	Online	18.10.23	No
6	Government	Delhi	Man	1st	Email	Online	18.10.23	No

Table 14 - Demographics of Participants of Focus Group Discussions:

		Number of Participants					
	Facilitators	*Transgender Women*	*Transgender Men*	*Gay Men*	Location *(Rajasthan)*	Date	Recorded
01	1	*5*	*1*	*1*	Community Centre	01.09.23	Yes
02	1	*5*	*0*	*2*	Community Centre	02.09.23	Yes

6.3.4 Study Location:

There is little known about the experiences of sanitation access and usage of Queer people in India, a specific state/location was not chosen originally in order to allow anyone with experience to be eligible for research.

The first four interviews were held in March 2023, with two held in-person in Delhi, and an additional two online discussions held for those not residing in the capital. Two additional online discussions took place in October of 2023 after the publication of the "Advisory for

[12] Where 'Relationship' refers to existing connections to the research team:
1st: Participant was known personally to the research team prior to interview;
2nd: The participant was identified through a colleague or previous interviewee;
3rd: No connection was established between participant and research team prior to interview.

[13] Where 'Recorded' refers to participant agreeing to be audio record the interview.

ensuring the welfare of Transgender Persons" *(NHRC, 2023)*, after advisors of the document agreed to explore the document.

For this work, the location of data collection was of lesser importance than previous chapters; the FGDs were held to highlight challenges and successes of sanitation, to document experiences of a select group of Queer people, but were not designed to create generalisable conclusions. This research did not aim to capture all experiences of Queer people in a given area, it centres on the types of challenges present, and the envisioned future that should be pursued. Additionally, although FGDs were carried out in Rajasthan, participants came from many different states across north and south India, and had lived in Rajasthan for varying time periods. As the FGDs were not intending to be geographically restrictive, participants were able to share experiences from current and past locations.

6.3.5 Analysis

Documenting Queer experiences of sanitation is relatively new and uncommon. A grounded theory informed approach to analysis was undertaken to allow for the data to drive conclusions through inductive reasoning, as opposed to trying to mould data to an existing framework.

The Grounded Theory informed approach uses constant comparison analysis *(Glaser and Strauss, 1967)*, which uses three main stages of organising data; open coding, axial coding then selective coding *(Strauss and Corbin, 1998)*, where overview themes are derived from the grouped categories of data. NVivo *(QSR International Pty Ltd, 2018)* was used for qualitative analysis in all stages of the constant comparison analysis, to categorise quotations in interview and focus group transcripts.

As a follow-on study from Chapter 5, it is evident that this piece cannot be unbiased. Discussions around discrimination and challenges drove the research in this direction initially, so this influence is likely to impact the analysis and results. When holding KIIs and FGDs questions were written to ensure leading statements were not made, and analysis was performed that isolated these discussions from previous interviews before any comparison was drawn.

6.3.6 Ethical Considerations

Prior to data collection, participants were asked to read and sign a Consent Form (Appendix A.3), and were also given a Participant Information sheet (Appendix B.3) and a Research Participant Privacy Notice (Appendix C) as additional reading about the overall study.

The research was conducted according to the 'Montréal Ethical Principles for Inclusive Research' *(Henrickson et al., 2020)*; these 12 principles signal best practice for conducting research with gender and sexually diverse persons (initially introduced in section 1.4). The principles include asking and respecting pronouns, using language self-identified by participants, recognising participants wider intersectional identity, engaging cultural advisors and insiders, and acknowledging successes and perseverance in addition to noting challenges. This was especially prevalent when conducting the FGDs. Here, these principles were met through extensive planning with the in-country research adviser Ravikirankumar Bokam. He was able to advise and edit planning materials alongside the lead researcher, to co-produce a FGD guide. The FGD questions were designed to ensure information pertained to the study, but also created space for participants to speak to related issues they found significant. Bokam also currently works with the FGD participants, and was able to identify moments of unease within the group, and was able to steer discussion in a way the lead researcher was unable due to language restrictions and unfamiliarity with the participants. Participants were made aware of the potential identification risk as the thesis identifies the facilitator, but all agreed before, during and after the discussions that they felt their anonymity would be preserved to a level they were comfortable with.

The study was initially given Ethical approval by the Engineering and Physical Science Research Ethics Committee at the University of Leeds, after submission in 2022 for the from Chapter 5 study. As this chapter closely aligns with the previous study, an amendment to the original application was made and passed in 2023, under the reference MEEC 21-020.

6.3.7 Disclaimer:

This research identifies the challenges and hopes for the future of sanitation amongst a small sample of government employees, activists, academics and Queer persons. This chapter does not seek to generalise and homogenise challenges, nor does it suggest the perceptions written are universal to all, or try to rank importance of the challenges presented. This study identifies new knowledge, and adds further evidence to existing challenges around Queer sanitation access, but the author does recognises this study is only one piece of work and further research is needed in India and globally to actively identify a pathway towards truly inclusive sanitation.

The KIIs (including government officials) continually used the term Transgender throughout the study, but this does not always align to the globalised or National Government definition of Transgender which is depicted as *"trans-man or trans-woman, person with intersex variations, genderQueer and person having such socio-cultural identities as kinner, hijra, aravani and jogta" (Transgender Persons (Protection of Rights) Act, 2019)* (as explored in 5.3.2). The term

'Transgender' was interchangably used to refer to Hijra persons, and conversely as an identifier for the whole Queer community.

The use of term 'Queer' has been contested historically. According to the Oxford English Dictionary, there are multiple definitions of Queer *(OED, 2023b)*:

> 1.a. (≈c.1513) "Strange, odd, peculiar, eccentric. Also: of questionable character; suspicious, dubious."
>
> 3.a (≈c.1914) "Originally U.S. colloquial. Of a person: homosexual. Also: of, relating to, or associated with homosexual people. *Frequently derogatory and offensive*"
>
> 3.b. (≈c.1990) "Of a person: having a sexual or gender identity that does not correspond to, or that challenges, traditional (esp. heteronormative) ideas of sexuality or gender. Also: of, relating to, or associated with such people or identities; concerned with such people or identities"

Though the word 'Queer' has a complex history of pain and empowerment, current activists call for the reappropriation of the word *(Learning for Justice, 2019; Wieboldt, 2022)*. When conducting the focus groups, the participants stated collective agreement that they would like to be referred to as Queer when discussing the community outside of their individual identities.

6.4 RESULTS:

The knowledge presented in this section illustrates the reality of national policy implementation and the prevailing attitudes and experiences of Queer people accessing sanitation. To explore how Queer experience shapes user's access to sanitation, the results explored connected issues of language, relationships, education and housing.

The SBM aimed to build physically accessible sanitation facilities, but this did not ensure equitable access for all, particularly Queer persons. Thus, this research explored accessibility beyond technical sanitation. Unpacking the sanitation needs and desires, and previous experiences, of Queer persons can equip researchers to understand their situation and choices with more nuance. Society influences the lack of access described by participants through discriminatory policies, prejudiced attitudes of family, friends and the external community, and uneducated and naïve decision makers. All of these tangential social factors contribute to a user's access to a sanitation facility; the following sections will therefore detail the peripheral challenges that contribute to access before exploring sanitation facilities themselves.

The research questions for KIIs and FGDs were designed to be open-ended, discursive and unbiased to engage a range of experiences around sanitation, covering negative, neutral and

positive emotions. However, all KIIs and FGD participants continually highlighted the challenges present, with rare occasions of positive or neutral experiences. The following results are biased towards emphasising challenges that prevent sanitation access for the Queer people. They do not aim to negate success stories, merely present the experiences of the select participants in this work.

These challenges centre around sanitation, however general challenges presented by participants are documented. The results therefore also include discussions on identity, language, housing, and community conflict, which all influence sanitation access indirectly.

6.4.1 Language: Homogenisation, Oversimplification and Inaccuracy

Queer identities are not new in India. Chapter 5.3.1of this thesis documents evidence of historical existence, in addition to the recent push for legal recognition by the National Government.

> *"Our existence has been there since ages; we are not people who have just come in existence very recently. In India, from the start of the civilization there has been a reported example of a Transgender. Since, it was started in the Ramayana and Mahabharat [ancient Vedic scripts]. It is not that we were not there, or we have recently come up. We had been there as earlier as the civilizations in our country. So, why not acknowledge it." (FGD 2, Gay Man 1)*

Yet, the general awareness of Queer needs is low, especially when gender interacts with other identities: caste, disability, age. Intersectional identity is rarely considered when discussing gender, this is evident for sanitation and the wider welfare system. This was continually highlighted throughout interviews.

> *"The story in India is not entirely different from the challenges that Transgender people face elsewhere. I think the role of caste, the role of privileges, is something that requires a bit more thought" | "We don't talk about disability and Transgender rights and inclusive sanitation, for example. We barely talk about disability and sanitation" (KII 3, Woman, Academic)*

> *"The awareness is low, but very important as of now, because until then, the people won't know that, what is the meaning of a Transgender person, and what are the needs of them? (KII 4, Transgender Woman, Activist)*

Language is everchanging, but definitions and choice of wording can have a huge impact on how communities are represented. As shown in 5.3.3 there is a history of homogenising language regarding the Queer community, especially by government.

"They [Government] are just thinking about the hijra culture in India. So, they don't even know about who is trans men and trans women. So, explaining to them that we are not the same, that there are subcategories, and everybody's having a different identity is difficult." (KII 4, Transgender Woman, Activist)

The term 'Transgender' is often used as a collective name for all gender diverse persons, yet this grouping fails to account for individual identities, and often incorrectly groups identities that are not synonymous.

"If we talk about government, then the government is unaware of the proper definition of Transgender. The government thinks they [Transgender women] are the ones who ask for money during occasions, who visit on occasions and give well wishes. They don't know about trans-men or trans-women. Even if they're aware, they have certain doubts in their mind." (FGD 1, Gay Man, Hindi)

As supported by the following:

"Hijra community is mostly seen as Transgender. So, those people who are cross-dressers and whose traditional occupation is begging; when there is a wedding or some auspicious event they go to their homes to bless whoever, like if a child is born." (KII 1, Man, Government)

"Whenever in any family a child is born, right, childbirth is one of the most important part for any family. And the second is marriage. Okay, these two events cannot get completed if Transgender are not present." (KII 6, Man, Government)

Collective naming of gender diverse persons as Transgender also results in grouping of other Queer identities. When there is limited understanding of the spectrum of Queer identities across gender and sexuality, over simplification and homogenisation occurs that groups people in ways that are not always helpful.

"The biggest issue is people don't know difference between gay and Transgender. People ask me about this…If I'm trans how did it happen? I can be gay from LGBT, but it means trans. They'd ask if you're a kinnara, hijra." (FGD 1, Gay Man, Hindi)

The misunderstandings occasionally go as far to assume that all Transgender Men are homosexual, showing unawareness for the difference between gender and sexuality.

"And the transmen face a lot of things. If they are saying they are transmen, then their colleagues … How would I explain this…? They think they are open to doing things…things with the men!" (KII 4, Transgender Woman, Activist)

The discrepancy in language homogenises groups and fails to account for intersectional identity; people are grouped as 'Transgender' without thought to their preferred terminology. This creates a direct impact on sanitation: When the Government claims to provide 'Transgender' sanitation, are they designing for hijra, Transgender, Queer or all persons?

6.4.2 External Social Challenges faced by Queer People

Access to sanitation is shaped by society, and the availability of facilities is shaped by individuals. Access requires the designer and implementer to understand the needs of the users, and individuals are the people that allow or exclude someone from using a facility.

Government and Public: Misinformation, Othering and Avoidance

Othering of Queer people is not a new phenomenon, and it is very much present in modern day India *(Debnath, 2017)*. Throughout KIIs evidence of othering of Queer people was documented:

> *"People from this community are not included in the mainstream. They're not seen as how we see the other people. They are seen as the others." (KII 1, Man, Government)*

Although the passing of the 2019 Act identified the need for increased acceptance and awareness of the Transgender community, KIIs and FGD participants all collectively agreed awareness of the general public is incredibly limited.

> *"Acceptance isn't present in schools, colleges, hospitals, be it any government policy, there is an acceptance issue everywhere. It's been 5 years since the Transgender Act was passed. But as regards implementation and change the progress is just half or one percent. There is still heavy lack of awareness. This is because the Transgender community was held back 1000 of years ago. 9 years is insubstantial." (FGD 1, Transgender Woman 1, Hindi)*

> *"There is lot of discrimination because this state or the country where we live is a male dominated society. And, LGBTQ people coming out and living as they want to is not acceptable in most parts of the country as of now." (FGD 2, Gay Man 1)*

Relationships Amongst Family

Across the focus groups there was limited evidence of positive family relationships; the gay men noted minimal acceptance by family, and all Transgender women shared negative experiences, ranging from non-acceptance and hiding of identity, to moving out of family homes due to tension surrounding 'coming out' or beginning to transition. The facilitator noted that around 80% of participants in FGD 1 did not live with their families, but in shelter homes because they did not feel safe with family.

Complex relationships with family were present across both focus group discussions, especially in FGD2 where most participants still lived with family (in contrast to the 1st FGD).

> *"Though I am living with family, there is no acceptance. There is still a notion in their mind that for them a son was born in the family. It is very difficult for them to accept a child was born as a son and later he has got transformed as a woman. Though I am living with them, even my mother and brother don't like to talk with me. I don't attend any family functions," (FGD 2, Transgender Woman 1)*

> *"It is very difficult to stay at home, living in the house is very troublesome. Brothers, sisters all of them keep me in limitations like where are you going or why you are doing this?" (FGD 2, Transgender Woman 2, Hindi)*

> *"It's not that I am completely disconnected from my family. But the thing is that we cannot openly talk to our family. The reason behind that negativity is that there is a very low ratio of acceptance. Hence, we hide our identity there." (FGD 2, Transgender Woman 3)*

> *"Then after my dad's death I started living a life 'normally' as a man because my mother needs support. They did so much for us, it's our duty to give back" (FGD 2, Transgender Woman 4, Hindi)*

Intra-community Conflict, Restrictions and Advocacy

Without the full engagement of the entire community and a proactive endeavour to comprehend the diverse needs of individuals, some people's requirements will go unaddressed. Historical homogenisation that fails to identify people by their preferred language, can result in intra-community conflict when time is not taken to understand the complexities and nuances of gender differences.

> *"This conflict between that transmen and transwomen, and the hijra community. So, we had a meeting with the community, I think three, four weeks ago, and they*

did not want to share the same roof. They are saying that 'we are different from each other, so you cannot put us under an umbrella, we have our own identity'. I think intracommunity tensions mostly revolves around identity, but hijras don't want to come into the fold of policy, and the transmen and the transwomen do not want to share the space." (KII 1, Man, Government)

Representation and Community Spokespersons

Community consultation is important for any program, policy or project. When discussing community involvement of gender diverse persons, professionals in the sector noted concern around true representation. All KIIs shared instances of Transgender persons' involvement in their Transgender programs, but highlighted the continual use of 'local celebrities' to act as evidence providers as opposed to reaching out to the wider community.

"Our ministry has always favoured the lobby, you know, the ones who are already famous, because it's easier to let the entire community know through them. Those lobby people, they have the same narratives, they already have too much power, and they don't help the rest of the Transgender community… When I was in one of the NCTP [National Centre for Transgender Persons] meetings, it was two, three very famous artists who you will see all the time on the news, all the time on late TV, reality TV shows and all of that, and they're there, and they're not allowing others. In one of the meetings we had a few other people from around the country attend, and they did not allow them to speak, not at all, and that was quite sad." (KII 2, Woman, Government)

"A lot of the leaders who are emerging are from privileged backgrounds. So, the question to ask is, are they representative of all the Transgender voices? And it often may not be" (KII 3, Woman, Academic)

This tension was seen in the FGDs, with participants sharing concerns over these local celebrities not actively representing the needs of the Queer people.

"Yes, representation can be anywhere. If they are taking celebrities, that's a good step but they should definitely look at people who are working at ground level more. Because they actually represent the needs of the community which we are facing." (FGD 2, Gay Man 1)

As noted, representation of the Queer people, especially the Transgender community, is through experienced spokespersons, most of whom have been activists and campaigners for years, but this leaves limited room for new and young Queer voices.

"There is a range of experiences that happen throughout the lifetime of a person, any person, whether it be a woman or a man or a trans person, and my experience is that all of the discussion avoids experiences of young Transgender people." (KII 3, Woman, Academic)

KIIs identified a disconnect seen in Chapter 6.4.1; holistic inclusion of gender does not mean engaging solely 'women' as only voicing Transgender women's voices does not ensure the whole Queer community are seen. Speaking with one section of a community does not create equal representation, nor does it ensure everyone's voices are at the table. When Transgender voices are represented in government and in the public eye, it is usually Transgender women's voices who are being projected, not the voices of the whole community.

"Who are getting represented? You'll find three names and they're always everywhere. Why them? When gender means only women, even for the ministry, for them also, Transgender community means only one who had become a woman as an identity, because at the end of the day, they're also Transgender, but they're also Transgender women. It's only women, women, women. Because they do not know the beyond, basically. They don't want to know the beyond. (KII 2, Woman, Government)

6.4.3 Queering Sanitation: Marginalised Experiences

As presented in 5.4.3, evidence external to this study portrays discriminatory access to sanitation by Transgender persons as prevalent *(Boyce, P. et al., 2018; Biswas, 2019; Chowdhary, 2021)*, the following documented experiences agree and add to this literature, particularly focusing on publicly accessible toilets.

"There's a lot of trauma involved in trying to access sanitation while also dealing with the fact that you're not fully accepted as a person" (KII 3, Woman, Academic)

"When we talk about a person that is not gender diverse, government is working in the field of sanitation and WASH areas. They are developing the toilets in low lying areas and in slums. But, when we talk about gender diverse people, the work is not up to the mark." (FGD 2, Transgender Woman 4, Hindi)

Public Sanitation… "barely better than nothing"

Technical Restrictions

When sanitation systems are designed for binary genders, they are not made accessible to the greater population. For example, if men's facilities are built that just include urinals, or don't have working cubicles, it can limit the use of these spaces. In one case, a KII regarded a time when she had gone out with her friend, and the men's cubicle he wanted to use was broken, so he wasn't able to use the facility at all.

> *"Because being as a transman, he cannot go and stand and pee, he did not have somewhere to go. I mean, I was shocked." (KII 4, Transgender Woman, Activist)*

Challenges for Transgender men are infrequently discussed due to societal focus on Transgender women, but this does not negate the need for attention for their specific challenges in accessing sanitation, for example, facilities are commonly unavailable that allow for managing menstruation.

> *"Transmen have many challenges. If they have to change pads during their periods, where shall they go, should they use ladies' washroom or gents' washroom?" (FGD 2, Transgender Woman 1)*

Social Restrictions

Separate Transgender Facilities

Separate facilities for Transgender individuals may alleviate stress and tension around sanitation. KIIs and FGD participants stated creation of separate facilities provide safe spaces especially during early transition.

> *"I am from the binary gender and recognise myself as a female only, I don't get any kind of discrimination. So, I'm going to use female toilets. But if we'll talk about the people who just started the transition, or they're in the mid-phase of transition, or they identify themselves as a hijra people or another identity, they will need that kind of separate washroom for them. If I talk about my experience, in the middle of my transition, I was not able to go to the washroom for long." (KII 4, Transgender Woman, Activist)*

> *"Whenever I was at school I would have to control myself. I felt I should join the girls. But I stayed like a boy so I couldn't join them. I couldn't go as there was no permission and I knew nobody." (FGD 1, Transgender Woman 3, Hindi)*

Unfortunately, demarcation of facilities for Transgender individuals can cause tension, notably in public areas where sanitation facilities may be scarce. The following quote pertains to the fate of a Transgender specific toilet that was built in the centre of Bhopal.

> *"Bhopal was among one of the first cities in India to open a public toilet for the Transgender, male and the female. I visited the toilet within one month of this opening up. The Transgender toilet was being used as a place for taking baths by other people in the nearby community. Gradually, it became like any other public toilet." (KII 1, Man, Government)*

These experiences show that although separate Transgender facilities can work in some instances, these individual facilities can be reallocated within a community, removing the intended access. In which case, participants called for non-discriminatory atmosphere in men and women's toilets so that they are able to use the facility of their choice without fear of harassment.

> *"There is always discrimination out there. If we use the ladies' toilet, the women there look as to why we are there; and if I go to men's toilet, there also people react in a strange way that why we are there…Even if there is no provision for separate toilet, we should be allowed to use either of the toilets. If we want to use a gents' toilet, then male members present there shouldn't question us as to why we are there. And, females should also cooperate in a way that we also belong to the same society. Why they treat us differently?" (FGD 2, Transgender Woman 3)*

The harassment and negative reactions can in some cases lead to violence, violence that will remain intrinsic to Transgender sanitation access unless the social shift is made towards genuinely inclusive and non-discriminatory access.

> *"There is a lot of demand for either segregated bathrooms or gender-neutral bathrooms, and the underlying problem is that it addresses only the sanitation part of it. But sanitation for trans people is not fully decoupled from the violence, and so that tension for me is unreconciled. If they actually use the toilets based on their gender, especially in men's toilets, they are very likely to face severe violence. In women's toilets, for example, if they go, they might face violence, but mostly it is verbal harassment and those kind of things. So, it's a tricky question, because you're trying to put a technological fix on a societal issue" (KII 3, Woman, Academic)*

Harmful Misconceptions

Discrimination and harassment in sanitation facilities can be attributed to many reasons, not least unawareness, ignorance, fear, and lack of exposure. This discrimination is seen across

home, public and work facilities. The following story highlights the dangers of misinformation that seeks to spread falsity and create significant unease and negative wellbeing effects for Queer people.

> *"When I talk about public toilets to them [Government], they say if a Transgender has defecated in the toilet, they stop using it; either they get it cleaned immediately or stay away from it. They say this toilet is not meant for us. The people that I've met from the government department are in favour of creating a separate toilet. They personally aren't involved in it and don't suggest where they should defecate. They think this is a disease, they think they'll become impotent and not have kids. This is their mentality. They think 'we'll be like them if we use the same toilet as them'." (FGD 1, Gay Man, Hindi)*

Personal Appearance

The appearance of participants was noted as the most significant driver enabling access into gendered sanitation facilities. Without stereotypical clothing (women in sarees, men in trousers and kurta), participants would struggle to access the facilities they required.

> *"If you want to use men's washrooms, you need to dress accordingly and the same goes for women. If you want to go to a women's washroom, you need to dress like lady." (FGD 1, Transgender Man, Hindi)*

> *"Although I dressed myself as male, I sometimes like to do makeup, or I like to dress in a certain way which brings out my feminine side. Recently I went to a restaurant and because it was jam packed, I had to use the men's washroom and that was also damn crowded. Each and every man was looking at me like as I was an alien. As I came to use men's washroom, they were like kind of teasing me, they were ridiculing or hooting and saying such things that it made me very-very uncomfortable. That was very harrowing experience, it was discriminatory and it was in a very bad taste." (FGD 2, Gay Man 1)*

This was especially evident in FGD2 where Transgender Woman 5 discussed her struggles of trying to access women's spaces following her reverting to wearing more masculine clothing due to family pressures.

> ***TW5:*** *"I can't go to a ladies' toilet, if any lady sees me there, she will definitely raise an objection.*
>
> ***TW 1****: She has to be in a lady attire, if she wants to use the ladies' toilet. But as she is in a gent's attire at present, she can't to go a ladies' toilet.*

***GM 1**: As a female, she needs to be in a ladies' attire. She is Transgender, so she was not able to use either a male or a female toilet, be it a gents' one or be it is a ladies' one. She has to face discrimination in both of those toilets.*
***TW 3:** This issue always arises when your attire does not match your appearance.*

Sometimes even when participants did wear stereotypical clothing they were still locked out from accessing sanitation spaces.

"I was in a saree and just headed towards the women's toilet. The caretaker there stopped me. He said it's not for you. I said the toilet doesn't differentiate. As I'm wearing a saree, I can use it. So now, even if I'm wearing a female dress, I'd hesitate in using the ladies' loo." (FGD 1, Transgender Woman 1, Hindi)

Restrictions When Travelling

Especially when travelling, the absence of a facility that can be accessed can dramatically impact physical and mental wellbeing. Both Transgender men and women in the FGDs raised concerns and shared stories of instances where they had to refrain from going to the toilet for hours at a time, or had to engage in risky practices because there were no accessible facilities.

"When I go to the railway station and have to catch a train and if I get a nature's call then I don't go to a toilet. I get angry and wonder what I should do. Sometimes I go home and freshen up. Sometimes I hold it for 6-7 hours until I reach Delhi from here. Then search for a place. Transwomen can get in the toilet if they're not ashamed but what can trans-men do? If you enter the toilet then the girls look at you with contempt." (FGD 1, Transgender Man, Hindi)

"When we travel we don't get a separate loo for a third gender. It happened to me, once I was travelling from Jaipur to Haridwar and in the midway I felt the I need of passing a loo. There was no facility provided for a transperson. So, because of that I had to go in the dark jungle in midnight to pass urine there. There were so many risks attached to it because there were so many men, so many animals could be there, like it was a big risk." (FGD 2, Transgender Woman 4, Hindi)

Household Sanitation … "It's like we're aliens"

Bastis, Slums and Informal Settlements

Marginalised persons (in this case, Queer persons) often face greater urban poverty *(Zahra and Zafar, 2015)*, which can manifest in reliance on shelters, and in some cases means housing in bastis, slums and informal settlements are the only accessible options.

"Sanitation in general is a very big issue and specially for people who are living in low-lying areas, who are living in slums. And, as far as the Queer community is concerned, we can say that we come from a section where we are considered minorities amongst minorities. So, our count is considered even after the minorities, and so I guess our basic needs is such" (FGD 2, Gay Man 1)

"I guess, there are some changes visible after the Swachh Bharat Mission and all these things, but still, we have to do a lot of things in the area of sanitation. Because, we know people are living in Bastis [slums type localities], they don't have proper facilities of sanitation." (FGD 2, Transgender Woman 4, Hindi)

Rental Housing Restrictions

Even if Transgender individuals are able to afford better quality housing with clean and accessible sanitation, discriminatory practices can prevent access to these spaces.

"Rooms for rent are not easily available for us. When we go somewhere, people don't give us rooms, there are many issues." (FGD 2, Transgender Woman 2, Hindi)

"Even if we do not do the sex work they will not provide us the places to live, because they will say that we do not belong to society, there is a different place situated for people like us to live and we have to go there and stay there." (FGD 2, Transgender Woman 3)

"It's already so hard to acquire even rented places. If I need to rent a house outside and if the ongoing rent is 2000, then I have to pay 4000 instead. Why is it so? It is because I'm a Transgender. We often have to pay double the amount. Secondly, I can't find a witness when I want to rent a house. That's why we have to stay in filthy squalors or slums. Where there are hygiene issues. That's the reason that our community dwells in slums." (FGD 1, Transgender Woman 1, Hindi)

Not So Neighbourly Attitudes

Societal discrimination of the Transgender community is evidently rife within the housing sector. Even when people are able to afford and find good housing, often harassment from neighbours can force someone out of their home.

"The place where we live has such an atmosphere that we are looked down upon. It's like we're aliens. A creature from another planet. And then there is

discrimination when we run some errands. The neighbour will look down upon us. they might make negative comments, they will say that you've given the house to the wrong person. So, then I have to empty the premise. Due to all this, we suffocate within ourselves." (FGD 1, Transgender Woman 1, Hindi)

"Even if someone gives us a place to live, the neighbouring people, surrounding society, dissuades the owner as to why the place or flat is given to a person like us? This deters them in providing an accommodation even when they are willing to do it… Society should know that every person has right to live despite his/her sexual orientation." (FGD 2, Transgender Woman 3)

6.4.4 Implementation of Government-led Policy, Programs and Policies

Although legislation and policies exist to protect gender diverse people, the active use and practice of these documents is undocumented and unseen, limiting the potential increase in society-wide acceptance of gender diverse persons.

"Legally they are being seen, right? But their acceptance in society is very partial." (KII 3, Woman, Academic)

Policy Curation: "you're breaking a lot of eggs, but where is the omelette?"

Minimal evidence is available that quantifies Transgender populations, or qualitatively assesses experiences of sanitation and general wellbeing broadly.

"We really don't have the data to inform the policies. So, we have interacted largely with the community. At the moment, I think we're still in that phase of evidence-building, yes? So, I think once these studies come out, maybe in the next five years, we have enough evidence. So, that would inform the policy bottoms up." | "So, there was this researcher, she wanted to do research on the socio-economic profiling of the Transgender community. The state was not willing to give her that financial support. This state does not have an official count yet, and they are not willing to spend money on generating evidence or conducting research. So, that willingness to go the extra mile and support research is what I think would be the first step towards translating evidence into practice. So, MP, Rajasthan, Uttar Pradesh, Bihar, these are all states that don't really feel the need to spend it." (KII 1, Man, Government)

"We need the data of the trans people; we need a census. Transmen, transwomen and the other social culture identities, the needs are different for them. So, we'll have to identify the needs for them. We need to do a need assessment and all, and accordingly we need to make the policies for them." (KII 4, Transgender Woman, Activist)

"So, when it comes to policy implementation, I think the scope of discussion has to widen. It has to go beyond looking at just how many pans are being installed or how many people are… We don't have any data, really. We have very little data; data is a huge issue. if you don't have data, you can't really work around policy, because that means numbers." (KII 3, Woman, Academic)

The lack of research, at least in government, can be partially attributed to hesitation from early career civil servants who are reluctant to go into the field to collect the data that is needed to drive new policies.

"No one is willing to do field work in India. There are a few very good NGOs who actually, actually work, but then a lot of people like me, and I'm not going to say, like, I'm really a good person, I know the reality. I also want to work, but am I willing to give up my luxury life? Am I willing to give that up to go to a very downtrodden district in Bihar and work? I know, I have my skill sets, I have the knowledge. I know who to contact. I can read Hindi papers and etc., etc. But I'm not willing to do that. I know inside of me, I'm not. I know I'm going to do a PhD, I'm going to write about them, but am I going to stay with them and really work for it? I know I'm not going to do that, and it's sad when you say that, you know, like people… I'm like, maybe not me. I'm going to probably help in a very weird, very upper-handed way, but we need more people in the field. We need a lot of people in the field," (KII 2, Woman, Government)

This lack of evidence hinders the future of program design; quantitative data often drives an evidence base, and without a recent census and additional fieldwork, gender diverse communities will remain unseen.

"They will never, ever get convinced that something is not working until the time you provide them numbers. When I speak to my friends who are not in the social sector, if I don't give them numbers, they are not convinced." (KII 2, Woman, Government)

The way programs are designed also influence the implementation. A recent focus on top-down approaches creates space for critiques as they are not driven by the populations intending to benefit.

"Before the Modi government, we had a lot of power to make the policies and everything, but once Modi came in… So, what happened, so now the policies come from the PMO's office, and then they are like, 'We need to implement.' Its become a top-down approach, and it shouldn't be. Government policies shouldn't be a top-down approach at all, but it is." (KII 2, Woman, Government)

Additionally, as welfare programs often span government and civil society, when they fail to produce successful results, beneficiaries can struggle to know who to approach.

"It's like the issue of state, the issue of the NGO, the issue of the secretary, the issue of the financial head, IFD. It's in multi-layers. Suppose if I am a Transgender person. I do not know who to blame, who to go to, because if I say, 'Acha, you are at fault,' she'll point fingers at someone else, and rightly so, because even they're at fault, and then he will say, 'Go to this person.'" (KII 2, Woman, Government)

Current policies around sanitation focus on people being able to access separate facilities, yet this fails to account for a nuanced and complex understanding of sanitation systems; stating the need for a separate facility does not address caring responsibilities, nor the types of fixtures needed to create a gender inclusive space.

"While the policies are really, I think they are quite forward-thinking, but I think it leaves out a lot of scope for important discussions if you want to meaningfully talk about sanitation. I think the question of the gender identity and what does sanitation involve, itself is such an unresolved question, right? If you're not talking about menstrual hygiene for trans people, that's such a basic thing that we talk about when it comes to women, but we don't really talk about it when it comes to Transgender-inclusive sanitation. The discussion about what does sanitation mean, has to go beyond water and soap and talk about menstrual health, hygiene, and more often than not women and trans people who have children are also responsible for other people in the family, right? They're not just responsible for their own sanitation needs, they're responsible for young children. They're responsible for elders in their family who are not able to go to the bathroom on their own, and so this discussion needs to have a much more nuanced understanding of what is required from sanitation, and I think that's a missing piece which needs some discussion." (KII 3, Woman, Academic)

Dissemination challenges and language barriers are also prevalent when circulating policies and programs (as demonstrated in chapter 5.4.2, with SBM Gender Guidance remaining uncirculated outside national government); publishing complex documentation does not necessarily lead to active use of it.

"They are unable to get through our documents because it's written in Hindi" | "Just because someone's well read, doesn't mean they've had time to do the reading." (KII 2, Woman, Government)

"There are a lot of people, even within the community, they don't have the knowledge that what are the schemes for them, what the government is doing for them?" (KII 4, Transgender Woman, Activist)

Implementation of gender diverse programs

Even when policies do get set in place, concerns were shared around who was designated to implement and monitor it, whether that be government officials who aren't sensitised to the needs of the community, or implementors such as male engineers who are chosen over social scientists.

"But biggest issues we are facing are that they don't have the proper knowledge, these people who are taking care of washrooms. So, even the government officials don't have the proper knowledge and they are not sensitive towards the needs of the community. Yes, they acknowledging our existence, are they are providing some relief, they are making policies for the community, but they are not sensitized. They are just making the policies but they don't know how to implement that in person so that it become a success." (FGD 2, Gay Man 1)

"That doesn't matter, if we start from top or bottom, if all the officials don't have enough knowledge, the discrimination will prevail everywhere. At each and every place, person be at the top, middle or lower level in the chain, if they all know about the Transgender community, that they do not discriminate the people who are liable to our community." (FGD 2, Transgender Woman 3)

"In India, especially the male engineers are taken as consultants over social science people, and they have no idea." (KII 2, Woman, Government)

Even so, multiple programs and policies exist to attempt to improve people's quality of life. The 2019 Act, the 2023 Welfare Advisory and the 2021-2026 SMILE program being the flagship elements. However, when these policies are rarely based on detailed research or have limited accountability, it stands to reason their success rate is low.

"On paper, then you can say that I've done all of these things. But then when you go out to see, their lives are no better. So, the question is, you're breaking a lot of eggs, but where is the omelette?" (KII 3, Woman, Academic)

"The government rules out policies, saying 'so and so must be done'. But they're empty promises. Nobody implements them." (FGD 1, Transgender Woman 3, Hindi)

"I look at these policies as a starting point, because these are not perfected policies, and I think not just sanitation policy, any policy goes through multiple rounds over the years. It might take decades, to really come to a point where it's being meaningfully addressed in the requirements of people. The policies will take some time, because I think only when these sanitation systems are being used, people then realise what is missing, what can be changed and how to change it." | "There has to be resources also allocated towards achieving these goals. It all sounds pretty magical on paper, but when it comes to the actual implementation, that's where, I think, policy and implementation diverge wildly" (KII 3, Woman, Academic)

As described in Chapter 6.4.2, government blindness was once again prevalent in KIIs experience of government, especially senior government. This blindness demonstrates dismissal of important and documented issues, and demonstrates the type of challenges present even when evidence is provided around Queer discrimination and limited service access.

"So, what happens is senior government comes with a very archaic mindset, right? So, when my colleagues and I, were like, 24, 25, even younger. We did understand ass-licking part of the bureaucracy. We found these huge issue in India, we take to the joint secretary, and they go 'Oh, it's not there any more,' … And we're like, it is there. We see it. There are news articles every day, every day. If you go to a few seminars in and around Delhi, there are huge seminars with research, these independent researchers who have taken proper ethnographic media-related document of that entire world, and they were still like, 'No. It's not there. False information'." (KII 2, Woman, Government)

Transgender Identity Cards: Restricting Freedom

In order to apply for Transgender welfare programs, that includes access to housing, education, and medical treatments, ID cards are needed for proof of identity.

"Without being given an identity card, you know, it's not possible to access welfare programs" (KII 1, Man, Government)

"For any sort of scheme, you need an identity card" | "Anyone identifying as Transgender also can apply for the SMILE scheme, as long as you take the TG identity card." (KII 2, Woman, Government)

To apply for an identification card there is a set process which involves submitting your name and address for approval from your district. This process is outlined on national and state level government websites, and is intended to be a relatively easy process.

"You go through the guidelines. You need an approval from the district, because you need this one address to be there on the card, and any address can work, you can give the Garima Greh's [Transgender Shelter] address as well. Then they're like, 'Whatever you tell us, whatever name you have, whatever your identity is, we're going to take that'. (KII 2, Woman, Government)

Unfortunately, the reality is that many people find the process intrusive, with government staff asking illegal and personal questions not relevant to the ID curation.

"You're not supposed to ask if you've done medical procedures or not, but they end up asking, and they're like, it's not a question that's actually legal to ask, but they end up asking" (KII 2, Woman, Government)

But in order to apply for the Identification Card, people must first know it exists, and be literate enough to fill out the paperwork required.

"To get that certificate, the one should be educated enough that they should be having an access to apply. Mostly, the Transgender people in India do not know how to fill out a form and all. If we talk about the census of 2011, the population was for, like, 490,000-something, and if you see the national portal now, only 15,000 certificates have been issued as of now. So, we can see the use gap from that population." (KII 4, Transgender Woman, Activist)

Even if all the paperwork is submitted, countless challenges arise when trying to get certificates issued, most of these concerns stem from government officials who are not familiar with the documentation, who do not want to work on Queer programs, or do not seem to care.

"The reality is that a government official has to sign the paperwork, and if he himself is like, 'I don't want to speak to them [Transgender persons]*.' … The government is liable to release those funds, give those identity cards, but they don't listen. They're like, 'We don't care.'." (KII 2, Woman, Government)*

"There are a lot of people who are struggling to get the certificate, because the process of issuing the certificate goes to the district magistrate, and the district magistrate people are not that sensitised and having much knowledge about the

trans people. So, the things get very slow, and it takes a long time to issue the certificate." (KII 4, Transgender Woman, Activist)

"In many places where the district magistrate signs some document or the officer at district level, he's not even aware. He doesn't know who are Transgender people, he is unaware of the language to be typed into the application. Secondly, even if he types it too, but he won't know where to submit it in the portal." (FGD 1, Transgender Woman 1, Hindi)

"A high-profile activist wanted to get the Transgender ID card made. It is the district collector who has to approve it, right? So, this guy was undergoing hormone therapy for some years. So, the hormone therapy takes time to give full results. So, but the district collector refused to give him the ID card because he said that, you know, 'I have not yet got a certification from your doctor that you have become a man. So, you have not yet changed your sex, so I cannot give you the ID card,' okay? Because he is very influential, he was able to get it, but a lot of other people in the community who may not have that influence, so they're not recognised. Something like hormone therapy may take years to develop. So, until then, they don't get their identity card and that excludes you from accessing welfare!" (KII 1, Man, Government)

Although physical threats of violence were only discussed in one interview, the drastic measures needing to be taken by an Interviewees' prior research participant to ensure they were taken seriously to have documentation signed was dangerous and saddening.

"A woman I worked with went to get her identity card recently, she went to the DCU who's the district commissioner, went to his office, and had to keep a knife on her neck [threatening to harm herself] to get her identity card." (KII 2, Woman, Government)

Without the official identification, active involvement in government is limited; legal recognition may be available, but that does not mean that it is easily possible to apply for or gain.

"How can we be involved in government policies if the voter bank is so low? Especially regarding policy generation on public toilets. How can trans community see involvement in it?" (FGD 1, Transgender Woman 1, Hindi)

6.4.5 Pathways for Change

Huge changes are needed to ensure accessible sanitation across the Queer community is available. Social and technical challenges need to be equally addressed to ensure sanitation facilities not only exist physically, but foster non-discriminatory environments that serve as safe social spaces for all people.

Investing in Data

Without accurate numbers of Queer people across India, it is near impossible for policies and programs to be created that run efficiently to meet the needs of the community they are trying to serve. Only by investing in data to quantify people and qualitatively explore experiences can meaningful change arise.

> *"We need to invest in special welfare, including research and development, because this current government is very anti-researcher. It's an anti-intellectual atmosphere. The Punjab government, West Bengal government is different. These are the couple of them who are very keen to engage consultants to collect evidence. They spend heavily on research and development, and those are the states that have developed policies that is backed by data" (KII 1, Man, Government)*

> *"The Census for Transgenders has been postponed, no idea when, but we will see a difference for sure." (KII 2, Woman, Government)*

Education and Eradicating Misinformation

KIIs and FGD participants emphasised the necessity for school-based educational initiatives that promote a broader understanding and exploration of gender studies. Ideally, this would foster greater acceptance from an early age that would develop over time.

> *"Educate the kids. It should be a part of education, since the childhood. That is the problem. Because when we are mature enough, it's difficult to change the mindset and all. We should always focus like that if we see the new generation, they're more into acceptance and all." (KII 4, Transgender Woman, Activist)*

> *"Why don't we start teach students about gender? So, every kid will able to understand at school itself about Transgender." (FGD 1, Transgender Woman 1, Hindi)*

The teaching to be shared calls for the need to humanise Queer people, to ensure they do not continue to be 'othered' by society.

"Discrimination can be eradicated from the society if they develop understanding that LGBTQs are all the same person as they are. They should not be discriminated on the basis of gender, what they exactly belong to. They are also humans; we are all humans." (FGD 2, Transgender Woman 3)

In addition to school teaching, further dissemination amongst Queer people is required to ensure awareness of rights and programs available intended to increase physical or mental wellbeing.

"Being associated with any LGBTQ group gives you a lot of information, you get to know about a lot of events that are being organised, you get to know about a lot of schemes being implemented for Transgenders, LGBTQ community in general. We come to know about a lot of issues the community is facing and the discrimination community is facing in various aspect of the life." (FGD 2, Gay Man 1)

Existing Visible Change

Diverse responses were collected in response to discussions turning towards perceived change over the course of the past few years since landmark legislation change. Both strongly positive and negative, the array of perspectives showed non-consensus on the topic:

"We do have an Act in our hand, so a lot of people are now coming out, and especially the transmen, if we'll talk about Transgender is an umbrella term. There are transwomen, transmen, and hijra culture and social culture and people. So, now we'll see that a lot of transmen and transwomen are openly coming out, and the change we can see with the family are also getting awareness about that, you know? And you can see the changes and the acceptance as well." (KII 4, Transgender Woman, Activist)

"This will stay the same all my life. No matter how much progress we make. This won't change in my lifetime. I'm here, I am aware about my identity, I've been listening to things like it'll change or so, but this is leading nowhere. I don't think it'll ever do during my lifetime. I know it." (FGD 1, Transgender Man, Hindi)

Historically welfare programs have had minimal recognition of gender diverse components, the hope is that going forward, this will change, especially with the curation of state-level Transgender welfare boards.

"Before Swachh Bharat Mission, while making the policies, the government has taken the consideration of Transgenders less. Now, whenever they will make

polices, they must include people from different genders also." (FGD 2, Transgender Woman 4, Hindi)

"13 states have set up the Transgender welfare boards. 13 states in India have done that, and other states are on their way" (KII 1, Man, Government)

6.4.6 Designing the Ideal Sanitation System

FGD Participants stated the need for a proactive approach to sanitation access, with a focus on mobilising the community to demand change.

"Trans must themselves be aware to fight for their rights. As we have a Supreme Court verdict by our side. We have the Transgender Act. We have a rule from 2020. So, we need to be aware ourselves for our facilities. Instead of waiting for the government to take initiative." (FGD 1, Transgender Woman 1, Hindi)

Gender Neutral, Transgender or Binary Spaces?

Across the focus groups, multiple ideas were raised with respect to how to demarcate a public sanitation facility that would clearly identify a safe space to urinate, defecate and menstruate. As signalled by the 2023 Welfare Advisory, separation of toilets (men, women, Transgender) was a popular answer across both focus groups.

"We need a separate one and there should not be any discrimination." (FGD 1, Transgender Woman 1, Hindi)

"If there is a toilet for girls then there must be a toilet for trans too." (FGD 1, Transgender Woman 3, Hindi)

"There should be separate toilets for Transgender. If they are available then any Transgender person can use it." (FGD 1, Transgender Woman 4, Hindi)

"There should be signages for Transgenders, like a fluid toilet or a Transgender toilet, so that we can identify that this is a toilet for a different gender." (FGD 2, Transgender Woman 4, Hindi)

Two participants (one trans, one cis) went further to suggest the need for additional separation to this, suggesting men, Transgender men, women and Transgender women should all have separate facilities.

"They must demarcate the ones for trans men from ones for trans women. Until we have a sign how'd we know this is meant for us? Whether we can use it?" (FGD 1, Transgender Woman 5, Hindi)

"I want to say there must be separate ones for trans-men and trans-women. Just as there are male and female ones." (FGD 1, Gay Man, Hindi)

Both focus groups discussed the need for inclusive language and attitudes for existing facilities. Stating that Transgender individuals should be able to freely use the existing facility of their choice, and that they don't need separate facilities, just that they want to be able to use existing facilities without judgement or fear of being removed.

"Even if we cannot provide a gender fluid toilet, we can put signs of LGBTQ on both men and women's toilets as well. That even this men's toilet is LGBTQ friendly and this women's toilet is also LGBTQ friendly at those places where we can't provide a third toilet." (FGD 2, Gay Man 1)

"If it's a male toilet there must be trans-male written on it and likewise for trans-women too." (FGD 1, Transgender Woman 1, Hindi)

"We don't need anything different. There shouldn't be a different washroom for Transgender people." (FGD 1, Transgender Woman 3, Hindi)

The final suggestion was to discuss the possibility of striving for gender neutral toilets, ensuring all people could access a facility regardless of gender, especially linked to the discrimination that can be attributed to attire.

"I feel it should be gender free. It must be gender neutral so that any gender can use it. In today's world we speak about equality, inclusiveness, so why should there be different signage? Why do we address based on the attire worn? Anyone must be able to use it. It's a basic need. The body is the same. Just the gender is different." (FGD 1, Transgender Woman 1, Hindi)

"I guess, an ideal toilet should be gender neutral. There should not be gender assigned to a certain toilet." (FGD 1, Gay Man, Hindi)

"It is that it should be like we can go anywhere wearing a saree or even other type of attire without any hinderance." (FGD 2, Transgender Woman 5, Hindi)

This discussion did not create consensus on the 'ideal' toilet type for all Queer people, but it did not intend to, merely begin the conversation about the diverse ideas for this diverse community.

Discriminatory Maintenance

Although many options exist in terms of demarcation of Queer-friendly sanitation facilities, they should not be explored in abstract. FGD 1 included a discussion around the concerns for maintenance if separate facilities were available; with discrimination still an active component of restrictive access, separate facilities could be prone to active avoidance of cleaning or taking over for other purposes (such as discussed in 6.4.3.1.2.1 where a government officer saw a Transgender facility repurposed for general bathing).

> *"Even if we have separate ones, how many of us will be able to use it? What if the caretaker makes it as a store for himself? We notice that the public toilets are unclean. There is no cleanliness. If we make it gender neutral then at least there would be cleanliness. If we have our own toilets the sweeper and caretaker won't get it cleaned, we know that the toilet we use will be unclean and harmful to us. That's why I feel we must make it gender neutral. Then it'd be better because it'll be cleaner then." (FGD 1, Transgender Woman 1, Hindi)*

Basic Requirements

In addition to signage requirements, many participants noted the explicit need for hygienic, accessible, and gender sensitive facilities. This covers the need for menstrual provision (especially for Transgender men), multiple toilet types (for squatting and sitting), regular water supply, in addition to general cleanliness.

> *"We should provide sanitary napkins, cotton and tissues at local toilets, so that way it would provide basic hygiene which we obviously require." (FGD 2, Gay Man 1)*

> *"Just as the sanitary napkins are present in ladies' toilets, similarly it should be available in men's toilets too, there should be a room with provisions of sanitary pads for transmen to change their pads" (FGD 1, Transgender Woman 1, Hindi)*

> *"There must be a western as well as an Indian commode. There must be cleanliness. There must be soaps available and as soon as you enter it should feel like a toilet." (FGD 1, Gay Man, Hindi)*

> *"There must be regular water supply, and the seats must be clean. There must be cleanliness" (FGD 1, Transgender Man, Hindi)*

6.5 DISCUSSION:

Pathways to available sanitation facilities are complex, and rely on multiple factors converging positively; society needs to act together to ensure inclusive access to sanitation services. The response across KIIs and FGDs regarding sanitation access was overwhelmingly negative, so the discussion aims to document the positive changes and key areas needing to be addressed to create inclusive sanitation. It breaks down society into supporters, neutrals, deniers and opposers, idealising a network that minimises transphobic and Queerphobic agendas.

Figure 5 displays these connected pathways, indicating what needs to be realised for successful sanitation. The actors comprise supporters, neutrals, deniers and opposers, shown at the top of the diagram. Being a supporter or an opposer is not specific to identity. Queer people can be deniers of others' rights, just as allies may support identities and groups to which they do not belong. In an idealised network the supporters would have the loudest voices (hence the colour gradient strength). These societal voices directly feed into whether sanitation is appropriate, available and accountable.

I. **Appropriate** facilities ensure there is technical capacity for an individual to manage their needs, with particular focus on urination, defecation and menstruation, through accessing infrastructure related to water supply, waste collection and removal.
II. **Available** facilities focus on how social dynamics affect access. These dynamics refer to availability of discrimination-free spaces that do not prevent entry of specific groups, equitable opening schedules that do not limit access, and availability of maintenance that ensures technically appropriate facilities are usable.
III. **Accountable** facilities refer to services where mechanisms are in place to protect rights, deliver programs and create feedback networks to increase service access.

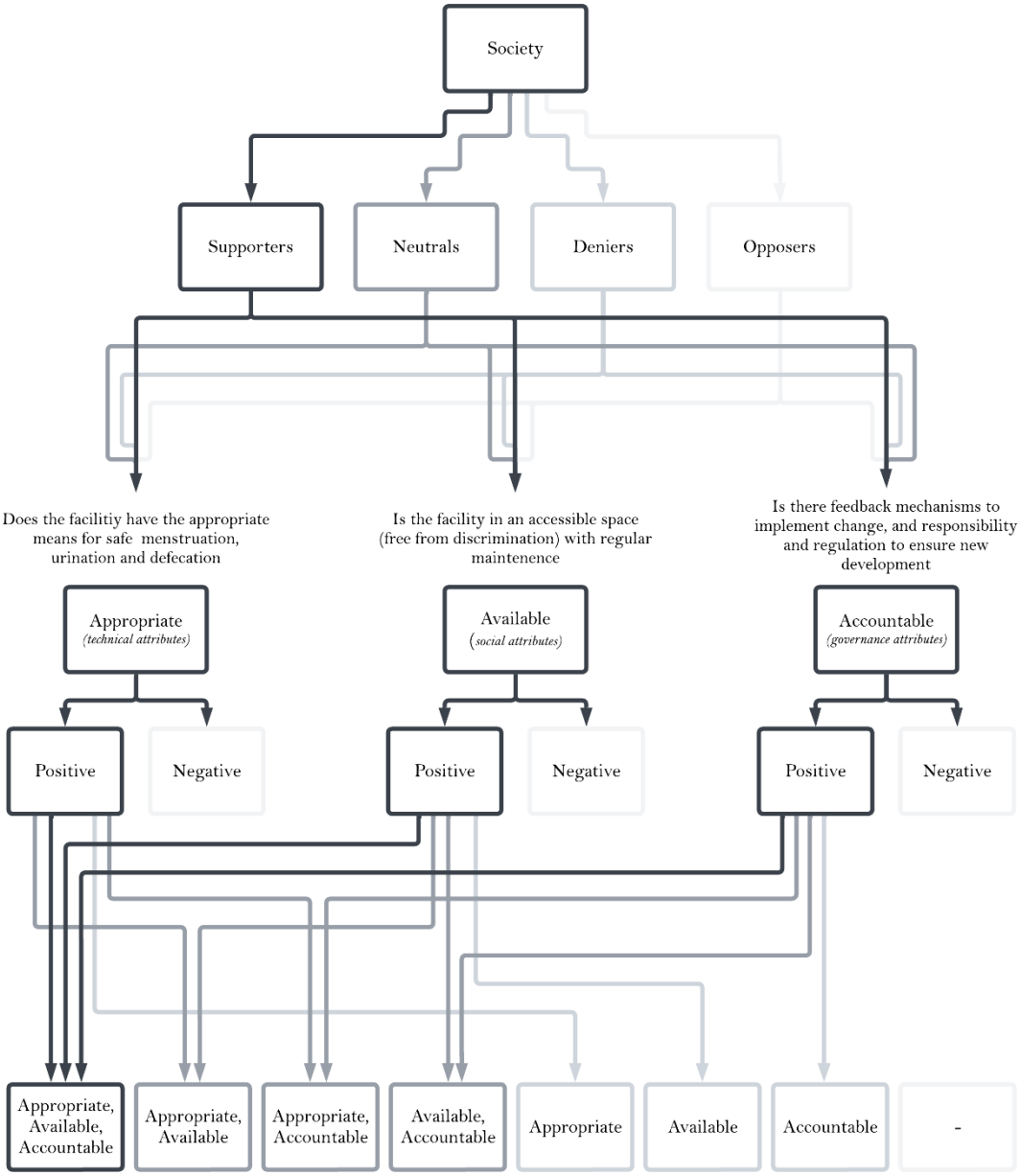

Figure 5 - Conceptual Model indicating pathways for inclusive Sanitation.

The voices that feed into 'appropriate', 'available' and 'accountable' fall into positive and negative; do the voices overwhelmingly understand the system, are they striving for positive change, or do the negative and neutral voices create stagnation in the form of negative manifestation? From arrows a sliding scale at the bottom of the figure is curated. For a facility to be appropriate, available and accountable, the positive voices need to outweigh others to create change. Without all three you end up with facilities that fail to meet all criteria as the discussion stops at the negative pathway. With only one or two of the factors, the resulting sanitation system will have inherent issues. Perhaps a facility is available, but the fixings are inappropriate and there is no accountability mechanism to create change. Perhaps government

is accountable, and the facilities that exist are appropriate, but there is no maintenance so they are unhygienic, unpreferable or even dangerous to use.

This diagram has been created to reflect how the Queer experience can be integrated into sanitation planning, through prioritising the voices of supporters across Queer and allied people, but can be extrapolated wider to understand general inclusion in sanitation. Technical engineering alone ('appropriate' services) will not create inclusive facilities.

6.5.1 Appropriate Facilities:

According to the JMP, a safely managed sanitation service should include a handwashing facility with soap and water *(JMP, 2018b)*, with fittings that are designed to hygienically separate excreta from human contact, and safely dispose of said waste in situ or through offsite treatment *(JMP, 2018c)*.

Inclusive facilities are those that factor in additional needs, both those with technical engineering ramifications (washing and disposal of menstrual or incontinence materials), and the social dynamics of availability (discriminatory access, poor maintenance…). When it comes to designing facilities that are inclusive of the Queer community, it must be Queer people detailing their own needs; services cannot be provided on assumptions from supporters. Campaigning for, discussing and publicising the needs of the community must be driven by the community.

But designing how inclusive services should be created does not create change alone. As seen in chapters 3 and 5, gender guidance has existed for decades across international, national and local contexts, and simply knowing the 'how' doesn't necessarily lead to its use.

The Contention with Transgender Toilets

For sanitation specifically the National Human Rights Commission of India released their welfare Advisory stating the need for Transgender persons to have a separate facility to cisgender people *(NHRC, 2023)*. The State of Madhya Pradesh also released their State Transgender Policy, designed by the Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis *(2020)*, in which the sanitation measures also stipulate separation of Transgender facilities.

These facilities have begun to appear across India; Bengaluru (Karnataka) *(Gowalla and Sanctis, 2019)*, Varanasi (Uttar Pradesh) *(Mathur, 2021)*, New Delhi *(Sharma, V., 2021)*, and Mumbai (Maharashtra) *(Wajihudin, 2022)*. When installed, the singular Transgender Toilet in New Delhi was said to be "*only a token, but it is still a ray of hope*" *(Sharma, V., 2021)*, and on 11th

September 2023, the Delhi High Court informed news outlets that over 100 Transgender toilets had recently been completed in the capital *(Rao, 2023)*. However, the existence of these facilities does not always correlate to usage of such facilities. In an interview with the Transgender community in Bengaluru, none had ever seen or used a Transgender specific toilet, even though reports of one surfaced 4 year prior in 2019 *(Deccan Herald, 2023)*.

The move to increase the quantity of Transgender friendly Toilets in India does imply inclusion, yet from this study it is clearly evident that separate Transgender facilities are not overwhelmingly favoured by the Queer people interviewed. In the FGDs some people favoured separate facilities, others wanted acceptance into existing women's and men's facilities, whereas others suggested moving to a gender neutral model for all. Demarcating spaces for Transgender individuals relies on all gender diverse people understand implied definitions of 'Transgender', and ensuring people in those spaces will not be recipients of discriminatory hate.

6.5.2 Available Facilities:

Available facilities are those which people can freely enter and safely use. This includes physical factors such as cleanliness through maintenance, and literal access, by potentially including timings of a facility if public. This ties into chapter 5, with evidence stating discrepancy between men and women's toilet opening times:

> *"Men's toilets would be open early in the morning, whereas women toilets are only opening at around nine o'clock, and these women's toilets would be closed early" (N-De-M-1).*

Availability also relies on social factors such as discrimination. It would not matter if a facility is technically appropriate, if other people prevent access. This chapter stated a selection of discriminatory behaviours towards Queer people, and without active attention to dismantling these social barriers,

> *"There is always discrimination out there. If we use the ladies' toilet, the women there look as to why we are there; and if I go to men's toilet, there also people react in a strange way that why we are there." (FGD 2, Transgender Woman 2)*

Many authors correctly attribute unequal standing of Queer people in India to British Colonial Rule *(Debnath, 2017)*, and the continued coloniality of the law *(Upadhyay, 2020)*. However, there is discrepancy between the timeline for discrimination dependant on the sources. In this study, Queer participants discussed always feeling held back, and being othered historically, whereas government argued that discrimination was only introduced by the British.

"This is because the Transgender community was held back 1000s of years ago." (FGD 2, Transgender Woman 1)

"Whenever problem comes, we always remember, anywhere in the world, the colonial masters. In India always, third gender were never discriminated. Gradually the distortion which has come in last 100 or 200 years we are now trying to correct" (KII 6, Man, Government)

The conflicting stories demonstrate discordance in perception. The Queer participant perspective suggesting ancient discrimination, and the Government perspective suggesting recent discrimination.

Standardised Identification

In 2011, the Indian census published data reporting 487,000 individuals identified as neither women or men *(Government of India, 2011)*. This figure corresponds to an 'other' category, commonly interpreted as the gender diverse community. The figure is critiqued and it is suggested that it dramatically underreports the accurate count *(Behal, 2021)*, but remains the only available national data.

Of these 487,000 individuals, the National Portal for Transgender Persons (NPTP) have only processed 19,000 certificates *(NPTP, 2022)*. Additionally, the Transgender Persons Protection of Rights Act *(2019)*, specifies that applications must be processed within 30 days. Of the 2500 current applications, 57% have been active for over 3 months, with 52% of those being pending for 7-12 months *(NPTP, 2022)*. The Times of India published an article documenting Transgender activists perspectives, attributing the low figures of uptake, and slow processing, to a lack of awareness and poor implementation of the 2019 Act *(The Times of India, 2023)*. The difficulty in accessing the certificate needed for many welfare programs was evident in this study.

"There are a lot of people who are struggling to get the certificate" (KII 4, Transgender Woman, Activist)

"In many places where the district magistrate signs some document or the officer at district level, he's not even aware" (FGD 1, Transgender Woman 1, Hindi)

The barriers to applying for registration prohibits access to welfare programs. It is also worth noting that to be eligible for the Transgender certification, you must be over 18. This avoidance of young populations is in line with KII experiences of excluding young Transgender persons in discussions.

"Most of the discussion is around adult Transgender people. We don't consider there is a range of experiences that happen throughout the lifetime of a person, any person, whether it be a woman or a man or a trans person" (KII 3, Woman, Academic)

If the Government of India continues to require a Transgender Certificate to participate in Transgender Programs, the accessibility of registration must increase. District magistrates and those in charge of signing paperwork must know what the documentation is and how to process it, and those applying must be given the information required to successfully apply.

6.5.3 Accountable Facilities:

Engagement within the Queer community ensures that diverse community perspectives are heard. As demonstrated by this study, often repetitive spokespersons are used when designing and disseminating government policy, and this has created tension and worries over unrepresentative feedback. One possible connection with repetitive spokespersons could be due to Caste. The tension is most documented in Hijra communities, where well-known spokesperson Laxmi Narayan Tripathstate repeatedly states that Hijra communities are caste-less and religion-less *(Bhasin, 2016)*. Laxmi was born into a Brahmin family (high Caste), and others born into lower castes identify that she may not see her privilege, and consequently the "inherent caste bias within some sections of the hijra community"*(Goel, 2018)*. There is no answer as to whether non-binary identities adhere to Caste systems, some individuals state they are caste-less such as Laxmi, and others state they belong to the Valmiki community (part of the Dalit (untouchable) caste) *(Goel, 2022)*. The point is that identity is shaped by multiple factors, and hidden privilege may factor into why certain spokespersons are repeatedly chosen over others. Active attention to this bias would allow increased diverse perspectives to be shared on behalf of the queer community when discussing new policies and practices.

FGD Participants stated difficulty accessing, understanding and submitting legal documentation for government programs, mainly for the Transgender Identification Certificate. Actively trying to be informed of policy could increase likelihood of awareness for other relevant policy, especially if dissemination remains limited. This alone will not lead to increased accessibility of inclusive sanitation, it must be in combination with measures from the supporting community. These suggestions may commonly be related to ideas of increased 'empowerment' or 'agency' of a community, but their relative power (a minority community with limited legal recognition) should always be considered and understood. People cannot empower themselves into having basic human rights and improved services; having knowledge of a legal system does not ensure you can access it or benefit from it.

The term 'Transgender' is "*emblematic of gender-nonconforming identities*" *(Chatterjee, 2018, p.311)*, and has risen in usage across India since 2000, yet the homogenising of identities under the umbrella term loses "*cultural specificities*" *(p.314)*. Language is complex and everchanging, yet this study documents the challenges with language, especially government employees.

> *"If we talk about government, then the government is unaware of the proper definition of Transgender" (FGD 1, Gay Man 1, Hindi).*

Without the support of a government that tries to understand the complexities associated with Queer Identities, policies and programs cannot be in place that actively include all gender diverse persons; how can you design a program if you do not know who you are designing it for?

6.6 CONCLUSION:

Access to inclusive sanitation facilities that are appropriate, available and accessible, is driven by society. Oversimplification and homogenising of identities to fit western global terminology has led to national unawareness of gender diverse persons and their diverse needs. The assumption that creating separate Transgender specific sanitation would automatically create inclusive services is also oversimplified, and potentially incorrect. There is substantial space for increased dissemination of existing policies (e.g. 2019 Act, SMILE, 2023 Welfare Advisory) to ensure all potential beneficiaries are able to learn about, and apply for them. Additionally, substantial space is needed for government to engage in critical reflection of who the Transgender community is, what their needs are, and how to actively progress towards greater equality.

7 CHAPTER VII

OVERARCHING DISCUSSION

7.1 COMMONALITY ACROSS STUDIES

Each of the studies explored in this thesis bring their own arguments and conclusions, yet there are three key challenges that connect each piece. Chapter 3 set the global stage, it identified commonality in challenges and successes that relate to gender inclusion work in WASH. Chapter 5 took these challenges, and contextualised them to explore how national level programming sought to include gender in sanitation, and the extent to which it was realised. Chapter 6 then documented the perceptions of sanitation for those excluded from mainstream program implementation.

Initially the three themes of this thesis were WASH, Gender and Development. As the work progressed the work moved away from development towards the wider intersection of sanitation and gender. As the thesis nears its conclusion, the three primary discussion points circle back to these original themes. The discussion points summarised in Table 15 are 'understanding gender and sexuality', 'prioritising accountability mechanisms', and 'connecting engineering and society', with each one directly relating to how WASH, gender and development is understood in the space.

Table 15 - Key Discussion Points seen across the thesis Chapters

	Chapter III	**Chapter V**	**Chapter VI**
Understanding gender and sexuality	There is a perceived disconnect between what gender 'should' mean and 'does' mean in practice.	'Gender' work predominantly targets women and girls, and excludes all others.	Minimal understanding of Queer identities outside the Queer community.
Prioritising Accountability Mechanisms	Although gender guidance exists globally to create inclusive sanitation, it primarily remains unused due to its non-mandatory nature.	National Policy does not get incorporated into State level programming: normative intent and implementation differ.	Language in guidance depicts what 'can' or 'should' happen, with no accountability/feedback mechanisms details.

Connecting engineering and society	Creating gender inclusive spaces is reduced to having women on committees and homogenising identities and experiences	Active avoidance of widened definitions of gender beyond women and girls	Availability of a physical facility does not ensure access without the attention to social dynamics

Prioritising Accountability Mechanisms

High level policy is created and seen by those who curate it. Increased effort must be made to ensure those who could use it have access to it, the associated funds to use it, and that those who would benefit from it know it exists to advocate for their rights.

> *[Chapter 3]:*
>
> *78% of participants stating using gender guidelines led to better equality outcomes, but that they were mandatory in only for 16% of participants, and heavily advised in 36%.*
>
> *[Chapter 5]:*
>
> *"To be very honest, my last six years I've never used them [SBM Gender Guidelines]. I've called up to say, hey, so these guidelines, this is great, tell me more, where can I get more money in order to implement some of these ideas? But who do I talk to, do you have an agency who could help us? I've not come across any such" (N-De-W-3)*
>
> *A lot of written policies and written issues, they want changes in a very transformational way. If you read through the guidelines, it will be politically more than 100 per cent correct. But when it comes to action or when it comes to translating that policy into action, at national level to provincial level to district level to subdistrict level, to panchayat… quite often in India we miss the implementation framework" (N-De-M-1)*

The use of the gender guidance during Swachh Bharat was never tracked, nor the accessibility of the sanitation facilities created. This thesis documents the challenges across the program generally, and then the resulting outcome for those not served by the program. In 2020, the National Government released further guidance on gender incorporation for sanitation in the 'Gender Responsive guidelines under Swachh Bharat (Urban)' *(Ministry of Urban and Housing Affairs, 2020b)*. The document begins by stating "Gender is a social identity", "it is often, but not necessarily, tied to bodily characteristics", "Gender inequality refers to the multifaceted issue of health, education, economic and political inequalities between gender diverse people i.e. men, women and third gender" *(p.11)* therefore insinuating the need for connected thinking on gender. However, it soon reverts to women-specific language: "Unhygienic (public) toilets and latrines threaten the health of women and girls" and "Girls and women have to stay at home during menstruation" (p.16).

The document does give clear guidance on what attributes of a Sanitation facility should be mandatory, essential, and desirable and reasons for wanting to mainstream gender in sanitation. The criteria are clear and quite exhaustive, covering entrance, location, lighting, caretakers, privacy, signage, water, soap, menstrual products, accessibility, affordability and there are diagrams to accompany this guidance. Section Three details the 'way forward', but this is where the document becomes like any other unaccountable superficial document; no accountability mechanisms to ensure use. Suggestions such as the need for a *"female caretaker hired, paid and supervised by the municipal authorities"* but with no detail on where municipal authorities can access funds to do this, or *"Training and sensitization of officers at all levels to respond to the needs of women and third gender as well"* with no detail as to where or how to get the training.

The document addresses international gender equality markers and indicators and specifies challenges that directly relate to sanitation. But what is not reported is any data specific to India's gender and sanitation challenges, reasoning for the document's creation, evidence of inappropriate or inaccessible facilities, or the feasible pathway to change it. The document is great at convincing you gender mainstreaming is needed in sanitation, but fails to document knowledge needed by engineers and practitioners to make change. Without approximate costs and associated funding, monitoring of use, or dissemination of the document people will continue to be unaware, unprepared, and unable to use it.

In a 10-person study documenting usefulness of process guidelines for sanitation, "all the interviewees recognised that, in principle, process guides may be helpful to guide the planning process and structure the decision steps" *(Ramôa et al., 2017, p. 162)*. The challenges raised for integrating process guidelines for technical decision-making echo reasoning from this study on limited use of gender guidance: limited translation into local languages, inaccessible or non-existent funding, and poor coordination amongst implementing actors.

Organisations, researchers and Governments worldwide state the importance of gender equality in sanitation in their policies and guidance *(e.g., Ministry of Drinking Water and Sanitation, 2017a; Sanitation and Water for All, 2021; Save The Children, 2015; Sommer et al., 2017; UNICEF, 2009f; WaterAid, 2018)*, but creating guidance without accountability mechanisms to ensure usage is superficial and tokenistic. Guidance is increasingly being utilised as a distraction and diversion, serving to imply significance without the necessity of genuine efforts toward its realisation.

> *"How real has the shift in approach been in terms of substantive environmental, developmental and political changes at national and local levels, and how much remains at the level of policy guidelines and rhetoric or piecemeal interventions?"*
> *(Utting, 2000, p.3)*

One approach to increase accountability within organisations (in this instance between National, State and Local Government), could be to use a Mechanism such as Sanitation and Water for All's 'Mutual Accountability Mechanism' (MAM). This mechanism states to be the *"only global accountability process in the water, sanitation and hygiene sector that is dedicated to all stakeholders working together towards achieving universal access to water and sanitation services" (SWA, 2019).* It acts as a platform to ensure partners make commitments that are 'specific', 'measurable', and 'time-bound'. The commitments that currently relate to gender equality include "targeted funding as well as by identifying good practices" *(SWA, 2021, p. 16).* Avoiding ambiguous language, and publicly declaring these commitments force greater accountability.

Understanding Gender and Sexuality

All studies in this thesis state 'gender' should be a complex social factor in decision making. It should account for multiple identities and needs, but the reality is that women and girls are the predominant focus of gender work, and their experiences are simplified, homogenised, and side-lined. All studies mentioned the need for increased attention to LGBTQ+ and Queer experiences, yet detailed unawareness or misunderstandings around policies, guides, funding or programs.

[Chapter 3]

"Even now, men and boys are typically seen as support to 'help' women and girls—rather than looking specifically at their risk factors or unmet needs" (Participant B: Academia, Woman)

86% of participants agreed or strongly agreed that "Gender often fails to acknowledge the existence of Transgender, non-binary and other minority genders"

[Chapter 5]

"Within the Indian context, unfortunately there's just a slither of people who believe that gender is more than two normative genders, and that's literally a slither. Most people, men and women, I wouldn't comment for the other genders, but for men and women, CisHet [cisgender, heterosexual] men and women, they do believe that gender means women, it's synonymous with women, which it isn't" (N-De-W-2)

"Men are being left out because they think focus is on women and all adaptations were about women's safety, et cetera, so men thought the sanitation programme is something that doesn't apply to them" (N-De-M-1).

[Chapter 6]

> *"They [Government] are just thinking about the hijra culture in India. So, they don't even know about who is transmen and transwomen. So, explaining to them that we are not the same, that there are subcategories, and everybody's having a different identity is difficult." (KII 4, Transgender Woman, Activist)*

Condensing 'gender' to equate with a simplified depiction of women is a disservice to all. It others all people who don't fit someone's understanding of gender, and fails to account for intersectional identity; age, disability, religion, education, caste (especially in India) and more directly affect how you interact with the world and the choices you make around sanitation.

[Chapter 6]

> *"The story in India is not entirely different from the challenges that Transgender people face elsewhere. I think the role of caste, the role of privileges, is something that requires a bit more thought" | "We don't talk about disability and Transgender rights and inclusive sanitation, for example. We barely talk about disability and sanitation" (KII 3, Woman, Academic)*

Connecting Engineering and Society

Sanitation facilities are more than pieces of technical engineering. The SBM promoted sanitation through messaging on promoting the dignity of women. Although the messaging portrays problematic assumptions of men governing women's dignity (as discussed in section 5.5), the building of toilets did lead to a reduced incidences of sexual assault *(Mahajan and Sekhri, 2020)*, therefore acting as places of safety. Aside from their role as somewhere to safely urinate, defecate and menstruate, SBM toilets were also used for storage, washing clothes, bathing and as play areas *(Coffey and Spears, 2017)*. For young Queer people toilets can also be for "seeking solitude, eating lunch and hiding" *(Slater et al., 2018, p.951)*.

Focusing on technical engineering elements without connection to wider society only creates technically appropriate facilities. If sanitation is reduced to technical elements, and then those technical elements are the only items surveyed and monitored, that data does nothing but serve as a doctored view of reality. Prioritisation of physically what exists does not serve to show an accurate picture of what is used.

[Chapter 5]

> *"They are monitoring how many toilets have been constructed, not whether you have become open defecation free" (N-De-M-2)*

Even if a facility is created that does meet all the technical requirements, it does not account for its availability or any positive accountability mechanisms required to maintain and improve it. By reducing the construct of gender, complex social characteristics that affect usage are lost.

[Chapter 3]

92% of participants agreed or strongly agreed that "Gender is not considered holistically in policies and programming"

[Chapter 6]

"This whole idea of what does sanitation mean, I feel, is really, really limited. It stops at the idea of having flowing water and soap for washing your hands and a structure where you can urinate and defecate, which is getting collected. So, it's a complex question as to what it means to look at sanitation from a Transgender perspective when you look at the whole social, technical aspect of it." (KII 3, Woman, Academic)

7.2 WHAT IT SHOULD MEAN TO "LEAVE NO ONE BEHIND"

'Leave no one behind' (LNOB) is a universal value of the United Nation's Sustainable Development Goals *(United Nations, 2017)*, and seeks to address inequalities that "*disproportionately affect particular groups on the basis of race, sex, language, religion, age, ethnicity, disability, migrant or economic status, and so on*" (p. 3), additionally gender equality is both a 'stand-alone goal' and is intended to be 'mainstreamed to all SDGs' through the LNOB approach *(van den Berg et al., 2017)*. The term is adequately vague for countries to reinterpret, often resulting in a focus on the extreme poor in isolation, with the use of the LNOB focus resulting in "*deflecting attention from the core issues of distribution of income and wealth, and the challenge of extreme inequality*" *(Fukuda-Parr and Smaavik Hegstad, 2018, p.1)*. Especially for the SBM study, 'leave no one behind' tended to mean 'most people gaining service is enough'.

[Chapter 5]

"We have to look at 99%, it doesn't mean that 100% is covered, there will be people left out" (G-Te-M-1)

The acceptance of failure to leave no one behind was also noted by former Swachh Bharat leader, Parameswaran Iyer: *"Team SBM realized very early that at the scale at which we were operating, and the level of decentralisation in the implementation of the program, there would always be some instances of gaps on the ground." (Iyer, 2021, p.205)*. This is not to say ensuring 1.4 billion people having sanitation access should have been easy, but the evidence indicates that before the program had finished, there was acceptance that certain people would be left behind.

Especially for marginalised communities such as the Queer community, the issue of population proportion comes into play. According to the government estimate, the 3rd gender population is approximately 0.5 million *(Government of India, 2011)*, and the gay population is estimated at 2.5 million *(Basbugoglu, 2020)*. There is no estimate for a more encompassing collection of Queer identities. These numbers may be small, but still represents approximately 3 million individuals that need access to appropriate, accessible, and accountable facilities. Other researchers dispute these figures, suggesting the Queer community is substantially larger, with figures closer to 45 million *(Kealy-Bateman, 2018)*, partially due to discriminatory attitudes towards the Queer community and existing criminalisation that prevent higher acceptance. The global pride survey in 2021 surveyed 19,0000 people, and suggested the gender diverse population in India could cover 2%, with 17% of they survey stating a sexuality other than heterosexuality (e.g. gay, lesbian, bisexual, pansexual, asexual) *(IPSOS, 2021)*, which would estimate a community of 238 million people.

The overturning of Section 377 and curation of Transgender specific policy may indicate change, but news reports continue to document Queer discrimination across the community *(Safi and Singh, 2019; Arya, 2023)*, especially after the refusal of the Supreme Court to legalise gay marriage in October 2023 *(Yasir and Travelli, 2023)*. These discriminatory practices can restrict personal freedoms on people's ability to be able to express their identity.

As an explicit reminder, Queer people are not the sole marginalised community in India. Scheduled castes (Dalits), disabled persons, tribal areas and the elderly all face differing discriminatory practices and attitudes, but these can interact with Queer experiences. This research just focused on gender discrimination, and how in turn it connected to associated marginalisation of Queer people.

Guidelines have been one way to seek to address gendered discrepancy in sanitation, but as highlighted by these studies in the failure of accountability, these documents are not producing active results. In India programs exist that focus on increased welfare of the Queer community, part of this is through Transgender Welfare programs such as SMILE *(Government of India, 2022d)*, however, to access such programs there are barriers in the policy terminology and language, and administrative blocks such as the need for ID cards to prove gender identity (which can be a complex and discriminatory practice, as documented in section 6.4.4).

7.2.1 Re-thinking how we monitor progress:

If the creation of best practice guides cannot instigate change, perhaps monitoring can be reimagined to more deliberately seek to leave no one behind.

The lead monitor of WASH globally is the JMP, who have reported country, regional and global estimates towards the progress of household, school and healthcare WASH facilities

since 1990 *(JMP, 2022)*. In addition to the JMP annual work, in 2013, 2016, 2018 and 2021, the Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) Reports were published by UN Water and WHO *(WHO, 2022)*. Both of these bodies lead on the monitoring of WASH, and should seek to monitor access in a way which actively pursues leave no one behind.

The 2022 GLAAS report does indeed have a section on gender, but it continually discusses *"women's participation"*, *"attention should be given to women and girls"*, *"momen in the workforce"*, and *"measures to extend WASH services to women and girls" (UN Water and World Health Organisation, 2022, p. 55-56)*. It does state the importance of meeting menstrual needs of "*women, girls, Transgender men and non-binary persons*" (p. 57), but with no attention to how it should or could be addressed. Earlier in 2023 the JMP released a special issue on gendered progress for WASH between 2000-2022 *(JMP, 2023a)*. This report did discuss how Queer experiences shape access to sanitation, specifically menstrual needs to accept that *"not all people who menstruate are women; not all women menstruate"* (p. 77), and a reference on how identity can shape access to sanitation following a natural disaster:

> *"Cisgender males and females, and those that identified as straight, were least likely to report unsanitary conditions [9-12%]. In contrast, 33% of those identifying as gay or lesbian, 67% of bisexuals and 89% of Transgender respondents reported experiencing unsanitary conditions 'a lot'" (JMP, 2023a, p. 44)*

There was also acknowledgement that *"definitions do not adequately acknowledge sexual and gender minorities, including people who are intersex or Transgender"* (p. 8), especially when monitoring sex-disaggregated data.

Sex-disaggregated data is intended to document *gendered* perspectives in a simplified world where Queer people do not exist. A direct example is demonstrated by a World Bank Blog on gendered data that states "Gender data is essential as we revisit remaining obstacles to the promise of productive and self-determined lives for women and girls globally" *(Bonfert et al., 2022)*. In reality Sex-disaggregated data documents experiences limited to cisgender people, or harmfully categorises Queer people by their gender assigned at birth.

> *"Sex-disaggregation has been—and largely continues to be—a binary representation of cisgender female and cisgender male populations. This binary interpretation excludes Transgender and gender-nonconforming people and further perpetuates marginalization and discrimination of these populations" (Colaço and Watson-Grant, 2021, p. 1)*

Marginalised Access as a Proxy for Inclusive Development

Designing policy and programs that reflect the population majority fails to identify the challenges of the most vulnerable *(Gilmour et al., 2020)*. An inclusive service is a good service; designing for a range of experiences creates a more robust service that adapts to different challenges throughout someone's life.

Perhaps a proxy indicator for gender equality would be to assess a service relative to its usage for Transgender, gender-non-conforming and gender-diverse people, just as general inclusivity could be assessed though a wider set of marginalised communities (Queer, tribal, extreme poor, disabled). There is of course contention with how to ethically define marginality (you can be Queer and affluent, as you can be cisgender and extremely poor), but readjusting the focus onto whether a service is appropriate and accessible for people who as standard are discounted from the majority, may ensure they are not continually ignored.

7.3 CONNECTED SANITATION: BRINGING IN THE BIG PICTURE

This discussion explores the need for connected thinking around sanitation: ensuring technical attributes are not designed without acknowledgement of societal interaction. Appropriate services need to meet the basic needs of urination, defecation and menstruation. Accessible services need to consider societal factors such as funding, discrimination, awareness, and security. And accountable services provide feedback mechanisms to facilitate change. Only by ensuring a service includes the aforementioned can intersectional vulnerabilities really be included and addressed.

What can Engineers do?

Engineers are designers and creators of services *(OED, 2023a)*. They are the individuals who ultimately are responsible for curation of a facility such as a household toilet or public sanitation block, meaning they have the ability to directly affect social wellbeing. Various engineering bodies around the world adhere to distinct codes, and perspectives on engineering ethics vary internationally *(Luegenbiehl and Clancy, 2017)*, but as this thesis is written from the perspective of a British Engineer using UK Research and Innovation Funding, a British Principle has been specified:

> *Respect for life, law, the environment and public good: Engineering Professionals have a duty to obey all applicable laws and regulations and give due weight to facts, published standards and guidance and the wider public interest."*
>
> **Statement of Ethical Principles** *(Engineering Council and Royal Academy of Engineering, 2017)*

This principle, if actively upheld, would 'give due weight to guidelines' and foster an environment of learning. It is an engineer's duty to actively try to ensure a facility they are leading is built according to the best information available, and will be as inclusive as their budget, schedule, and capacity will allow. Engineers should be actively searching for new standards and guidelines, and then be given the means to use them, so they may be empowered to go beyond what is legally required. Increased responsibility on the engineer's behalf could create incentivisation to create services that limit decreased social wellbeing and increase social mobility.

7.4 HUMAN CENTRED DESIGN:

This thesis details the challenges present that are inherent to integrating gender guidance in WASH programming. One way to limit these challenges is to stop curation of identity-specific guidance. When gender is separated from a 'standard' or 'essential' need it is repeatedly side-lined, the same can be said for disability guides or other tangential guides that seek to increase inclusion.

The separation of identity characteristics insinuates they are discrete, but they are not. It also creates hundreds of documents and best practice guides that demonstrate the ideas connecting to making a specific inclusive facility, which overwhelms the development space.

One way to more actively integrate gender into program design is through Human Centred Design (HCD). This involves a creative and iterative problem solving approach, prioritising solutions that are desirable, viable, and feasible *(IDE, 2019)*; it prioritises the voices of the people who will use a facility, creates solutions with communities, and delivers a sustainable model to increase service provision. These three lenses explore the following:

> ***"Desirability (Rooted with the users)***
>
> *What do users need and want? What are the drivers and barriers to adoption? What incentives drive their decisions? What is the entire user experience like, from the moment they are exposed to the solution to their ongoing use and maintenance?*
>
> ***Feasibility (Technical)***
>
> *What can be done technically? Will this technology work locally?*
>
> ***Viability (Economic)***

> *What is financially and economically viable? Is there a financing model and incentive structure that allows this solution to be sustained for as long as it is needed?"*
>
> *(iDE, 2022)*

Having non-standard designs removes expectations for what certain people 'should' want, there is no perfect way to make a gender inclusive facility and the development sector should acknowledge that. Studies are beginning to be published that show how human centred design can address complex problems in WASH by ensuring the "creation of solutions truly desirable, feasible, and viable for the community" *(Lubis et al., 2021, p. 781)*. This approach de-centres 'gender' to create genuine holistic programming, by understanding contextual barriers and needs within a community, without imposing external solutions that do not understand the requirements of a community.

Without acknowledgement of the structural issues that influence access to sanitation, accessible, appropriate and available designs will not be created. HCD is one method of engaging with the structural challenges of a community to actively put community needs first.

The collaborative process relies heavily on community-centred design. It is therefore essential to ensure active recognition of the disparities in power and vulnerabilities among individuals. The practice is challenging, and can result in difficulty for compromise, but is an example of one way in which people's needs can be centred without making assumptions.

8 CHAPTER VIII

CONCLUSION

8.1 CONTRIBUTION TO SCHOLARSHIP

PhD Aim: *Assess the disparities between policy and practice for gender inclusivity in WASH across global, national and local levels, give voice to marginalised communities and identify pathways for truly transformative inclusivity approaches in sanitation.*

The empirical chapters in this thesis addressed gender disparity at the global, national, and local level. Beginning with Chapter 3, the study looked across country lines to explore global commonality in the way development approaches design, implement and disseminate work around gender. It contrasted the awareness of gender guidance with the reality of implementation, and noted the potential causes for low-uptake. Chapter 5 then used this knowledge to create a study that identified the challenges with curating and implementing national gender guidance in government development programs. The Swachh Bharat Mission (SBM) included multiple references to gender inclusive programmatic elements, but upon conclusion of Phase 1, many practitioners had remaining questions about accessing funds, disseminating across government and active practices that could be used to create gender transformational programs. Finally, Chapter 6 investigated how the active exclusion of queer people has shaped their access to, and usage of sanitation facilities. SBM did include guidance on inclusion of transgender communities, but this is not realised in practice; vague and immeasurable policy combined with discriminatory government attitudes and low awareness of needs outside the Queer community remain to drive access challenges. The thesis does not seek to definitively state an exhaustive list of the ways gender influences sanitation practices at the global, national, and local level, but it does give contextual examples of how challenges and successes manifest at differing levels.

This research engaged with implementing organisations, individual researchers and 135 participants directly; 37 survey respondents in Chapter 3, 22 interviewees, 56 focus group participants in Chapter 5, and 6 interviewees and 14 focus group participants in Chapter 6. It prioritised the voices of practitioners, activists, and end users to document personal experiences and perceptions of accessing sanitation across state lines. Especially when discussing how Queer identity can shape sanitation in Chapter 6, 75% of participants across interviews and focus groups were Queer themselves. Throughout the thesis, quotes that are

uninterrupted, substantial and illustrative to drive the results and discussion, ensuring the voices of participants are valued.

Only by combining the discussion points across all empirical research in this thesis can the work attempt to pull together options for transformative inclusivity approaches. At the global level greater accountability is called for to ensure gender guidance is used. At the national level, the main challenges for gender inclusion in sanitation were posed by the organisation; ministry coordination, clear funding mechanisms and active dissemination of inclusive policies therefore need to be actively engaged. At the local level, there is need for greater diversity in the voices that influence policy to ensure true community representation and participation.

8.1.1 Objective 1:

Investigate the Discrepancies between the stated intentions and actual Implementation of Gender Equality Practices in Evaluation Reports.

This thesis satisfies the research activities as set out in 1.2.1, and presented in Chapter 3.

- *Systematically review multi-lateral organisation's WASH Project Evaluations;*
- *Analyse the prevalence of gender in WASH Evaluations using a gender inclusion Framework;*
- *Conduct primary data collection to validate self-identified challenges in inclusion implementation.*

The research has since been published by Development Policy Review *(Robinson et al., 2024)* and demonstrates the discord between affirming commitments to gender equality measures and actively implementing transformative measures in WASH programming. The novel research investigated development agency investments, to conclude that greater attention and accountability is needed to ensure gender equality is intrinsic to the design and implementation of development programs.

8.1.2 Objective 2:

Examine the Failure Modes of Gender Equality Implementation in Swachh Bharat Phase 1.

This thesis satisfies the research activities as set out in 1.2.2, and presented in Chapter 5.

I. Conduct primary data collection to document gender guidance usage in SBM;

II. Use a Failure Framework to analyse perceived challenges in implementation;

III. Document barriers that prohibited gender guidance being integrated into implementation.

Swachh Bharat Urban and Grameen ran with core gender components, and were supplemented by additional gender guidance, yet its uptake, usability, and barriers were not documented. This study assessed the prevalence of gender guidance usage across program design and implementation, and documents the perceived barriers that decrease usability. The analysis uses a failure framework that demonstrates organisational challenges cause the most prominent usability blockage.

8.1.3 Objective 3:

Apply a Dual Perspective Grounded Theory Approach to Investigate Policy Makers' and Queer Communities' Perspectives on Queer Access to and Usage of Sanitation.

This thesis satisfies the research activities as set out in 1.2.3, and presented in Chapter 6.

I. Conduct Interviews to explore government-led gender diverse programs;
II. Conduct Focus Groups to document sanitation access for Queer participants;
III. Identify the key barriers and recommendations for increasing inclusion for diverse communities.

Hundreds of thousands of people in India face discriminatory access to sanitation systems because of their gender and sexuality. KIIs shared experiences relating to technical capacity of government to address the needs of Queer people, and FGDs documented the societal challenges associated with safely accessing sanitation. To address the barriers that prevent appropriate, available and accountable services, positive pathways need to be forged that prioritise supportive voices over those who would deny or oppose the rights of the Queer community.

8.2 Impact Contribution of Whole Thesis:

This thesis strives for the narrative on Gender to think beyond women and girls, to think beyond binaries. It demonstrates that gender is and always has been more than women and girls, and that the homogenisation of identities is harmful as it fails to account for people's complex intersectional identities.

The studies in this work fill gaps in knowledge that revolve around the reality of guidance usability, and proves that society cannot be disentangled from engineering decisions.

The thesis builds upon prior research that has documented the prevalence of gender equality outcomes in WASH interventions *(Macura et al., 2023)*, and extends previous scholar's work

that specifies the challenges of the Queer community for accessing sanitation in South Asia *(Boyce, P. et al., 2018)*. The results are based on reliable data, collected ethically, with external validation from supervisors and anonymous partners.

This research calls on the need for Engineers to actively take responsibility for creating inclusive services. Those designing sanitation services, WASH services, or services that satisfy basic needs should strive for the curation of inclusive services that create access for all.

8.3 LIMITATIONS

Practicalities of Research Design

Managing stakeholder engagement across countries, during COVID-19 and with internal restrictions on funding directly affected the outcomes of this thesis. Going into the research, there was every intention that co-production of knowledge would be prioritised during the Indian Studies in this thesis. However, creating partnerships in uncertain times during the pandemic meant organisations had less capacity for outreach and designing new relationships. Additionally, the challenge of Indian organisations having government-imposed restrictions on funding meant a reduction in the funds available to be given to an organisation. Finally, restrictions on free speech influence the way an organisation can critique government; criminal laws are used to limit free speech and restrict activities by nongovernmental organizations *(Human Rights Watch, 2016)*. Sections of this research critiqued government implementation of Swachh Bharat, and highlights the misconceptions, misunderstandings, and ignorance of employees towards gendered practices. Organisations therefore had to risk the side effects of receiving international funds, openly critiquing government, and creating new relationships in uncertain times. These reasons explain the resulting partnership; anonymous organisations working alongside the work to guide, but not sponsor, publish, or broadcast the work.

Pragmatic decisions were taken throughout the course of this PhD to render the scope of data and associated analysis manageable. Only two organisations were assessed for gender practices in their development projects, only perceived challenges were noted in the Swachh Bharat gender integration experiences, and only one location in Rajasthan shared how Queerness shaped sanitation experiences. However, small sample sizes do not necessarily indicate low quality or an absence of rich information. This thesis does not insinuate all organisations have insensitive gender programming, nor does it critique every aspect of Swachh Bharat or Queer sanitation incentives, it simply explores smaller sample sizes to discover detailed experiences with specific contextual factors. The research is not necessarily generalisable directly to wider contexts immediately, but the framing serves to explore gender at differing layers and sections of society (institutions, infrastructure, interactions and

capabilities), and therefore extrapolating these types of challenges could indicate where to investigate when addressing a similar study in a differing context. One example could be the through the proposition of a wider use for The conceptual Model in Chapter 6 (Figure 5, Section 6.5). Initially proposed as a way to document queer-inclusive decision making and success pathways, it could be used to document wider disconnect across gender equality more broadly.

Language influenced available source material, and the conversations and interviews had throughout this PhD. Only being fluent in English restricted literature available, and it is possible important documentation was missed from the studies presented in the thesis. The colonial occupation of India by the British has resulted in lasting influence of English being prioritised for reports, policies, and guidelines, so for this instance only searching English literature was not a limitation. All interviews in this thesis took place in English at request of the participants but focus group discussions were all held in Hindi with translators. Although the translators had extensive experience translating Hindi, it is assumed potential mistranslation could affect the specific wording, phrasing or nuance in the text used to depict a conversation.

Restrictions of the COVID-19 Pandemic

This doctorate began life in September 2019 when I started the PhD program. The first year included masters modules, and formulating thesis ideas, and culminating in the proposed thesis topic, methods and research questions. However, when COVID-19 surfaced at the beginning of 2020, it changed the course of my degree. International fieldwork was no longer an immediate option, organisations understandably did not have the capacity to support future planning for research partnerships, and I was facing the possibility that I may have to complete this degree from my apartment in Leeds. I began focusing on global trends, and analysis of evaluations as that did not require complex contextual understanding of experiences and implementation in the same way that in-country fieldwork would require. The PhD initially intended to compare national gender policies and sanitation programming, but from an outside perspective, potentially with online interviews of practitioners to document changing experiences across country borders.

For 2022 the University of Leeds lifted travel restrictions internationally, suddenly it was possible to conduct an in-depth international study, and I would be able to spend time living where I was working, helping foster knowledge not possible from a desk in Leeds. I worked to get my ethical approval, risk assessments, VISA and travel arrangements sorted and arrived in India 3 months later to begin a 3-month trip from April-July. Data collection was a success, but I still required another trip to be able to explore the Queer experiences beyond the partial anecdotes from phase 1. In February 2023 I returned to India for two months to finish

recording experiences of sanitation by Queer people themselves. This meant returning to the UK in late March with 6 months until the original PhD submission date. Being able to do this fieldwork allowed for experiences I would never be able to have from a desk and created lasting relationships that wouldn't be as strong had they been forged behind a computer screen, but the timings caused major delays for this PhD.

8.4 FUTURE RESEARCH DIRECTION

Creating Accountability: Monitoring usage of Gender Guidance

Gender Guidance exists for WASH across multiple organisation types, from national policy on government-ran programs, to international guidance from development agencies. This thesis begins to document their usability, especially for national programming, but further evidence is required to definitively assess the usability of guidance. The present work suggests low usage is due to non-existent accountability mechanisms and minimal or absent funding. Gender guidance needs accountability to ensure its use, or it needs to be reimagined entirely. Using an accountability framework such as Sanitation and Water for All's 'Mutual Accountability Mechanism' (MAM) may help to begin to close the accountability gap between policy and practice. Creating guidance that remains unused is a disservice to the people that are intended to benefit from it.

Proxy Indicators for Inclusion: Marginalised Access

Monitoring the majority of a population fails to document the challenges for those marginalised by society. Could monitoring those on the periphery be a proxy indicator for inclusive WASH practices? Conducting research into how to more accurately reflect a population who is historically discounted from the majority could shape how inclusion is monitored, and provide answers about how these communities access and use services.

Human Centred Design: A Tool to Create Transformational Practice

Separation of gender guidance from core program components has resulted in low accountability of individual's needs. HCD is driven by the needs of the community and the drivers and barriers to adoption, and seeks to design services that are inclusive of a whole population without exclusion of minorities. Within WASH, few studies assess HCD beyond its potential for genuine holistic programming, so additional studies are needed to prove that the method shows definitive results in addition to the promise of its potential.

Intersectional Guidance: Identity Characteristics beyond gender

This thesis explores how gender equality is prioritised in development programs, but does recognise that gender is one aspect of intersectional identity. Exploring the usability of other guidance associated with other identity characteristics (e.g. disability) could provide validation for the barriers proposed for gender guidance, and further the notion for the need to remove specific guidance that repeatedly fails to be used, advocating for a human centred design approach.

8.5 Concluding Remarks

This thesis examined, categorised, and investigated gender equality across WASH programming. It documented the disconnect between political and organisational intention to demonstrate gender inclusive practices with the reality of misuse, disuse and abuse of gender guidance, objectives and policies. Organisational appearance drives the need for an outward focus on gender within development programming, but the avoidance of funding, accountability and dissemination proves that gender equality is not currently a key component of program design. Transformational gender inclusion will only be realised when it stops being discounted, when gender is seen as a complex partial factor of someone's identity, and when diverse voices are represented at decision making tables.

Gender equality should manifest beyond binaries to promote truly inclusive sanitation, and this thesis demonstrate why that should be the case.

References:

Africa National Congress. 1994. *The reconstruction and development programme: a policy framework*. [Online]. Johannesburg, South Africa: Africa National Congress. [Accessed 2 September 2020]. Available from: https://www.gov.za/sites/default/files/governmentgazetteid16085.pdf

African Development Bank. 2009a. *Checklist for gender mainstreaming in the water and sanitation sector*. [Online]. Abidjan, Core d'Ivoire: African Development Bank.

African Development Bank. 2009b. *Checklist for gender mainstreaming in the water and sanitation sector*. Abidjan: African Development Bank.

Agoramoorthy, G. and Hsu, M.J. 2015. Living on the Societal Edge: India's Transgender Realities. *Journal of Religion and Health*. **54**(4), pp.1451-1459.

Ahluwalia, P. 2021. *Seven years of Swachh Bharat Mission*. New Delhi: PRS Legislative Research.

Aiyer, S.P. 1960. India's Emerging Co-Operative Federalism. *The Indian Journal of Political Science*. **21**(4), pp.307-314.

Alam, S. 2008. Majority World: Challenging the West's Rhetoric of Democracy. *Amerasia Journal*. **34**(1), pp.87-98.

Alim, T., Shihab, M. and Hossain, A. 2022. Experiences of intersex individuals in Bangladesh: some reflections. *Sexual and Reproductive Health Matters*. **29**(2), p2149054.

Aliyu, A.A., Bello, M.U., Kasim, R. and Martin, D. 2014. Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners. *Journal of Management and Sustainability*. **4**, pp.79-95.

Angel, S. and Arya, N. 2023. Decolonising Caste in the Indian Context: The Psyche of the Oppressor. *Psychology and Developing Societies*. **35**(1), pp.110-130.

Anthony, K.H. and Dufresne, M. 2007. Potty Parity in Perspective: Gender and Family Issues in Planning and Designing Public Restrooms. *Journal of Planning Literature*. **21**(3).

Arya, D. 2023. India LGBT couples: 'My parents were ready to kill me for their honour'. *BBC*. [Online]. 27 July. [Accessed 21 December 2023]. Available from: https://www.bbc.co.uk/news/world-asia-india-66245194

Asian Development Bank. 2002. *Gender checklist: Water supply and sanitation*. [Online]. Manila, Philippines: Asian Development Bank.

Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis. 2020. *State Transgender Policy Madhya Pradesh*. Bhopal: Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis.

Attaran, A. 2005. An Immeasurable Crisis? A Criticism of the Millennium Development Goals and Why They Cannot Be Measured. *PLOS Medicine*. **2**(10), pe318.

AusAid. 2000. *Gender guidelines: Water supply and sanitation: Supplement to the guide to gender and development*. [Online]. Canberra, Australia: Australian Agency for International Development.

Babbar, K., Martin, J., Varanasi, P. and Avendaño, I. 2023. Inclusion means everyone: standing up for transgender and non-binary individuals who menstruate worldwide. *The Lancet Regional Health - Southeast Asia*. **13**.

Bagagli, B.P., Chaves, T.V. and Zoppi Fontana, M.G. 2021. Trans Women and Public Restrooms: The Legal Discourse and Its Violence. *Frontiers in Sociology*. **6**.

Bajaj, I. and Indapurkar, K. 2018. Status of the Third Gender in India: Comparing the Present with Primeval. In: *10th International Conference on Language, Humanities, Education and Social Sciences, 12-13 January, Bali (Indonesia)*. [Online]. Bali: Dignified Researchers Publication, pp.18-23. [Accessed 28 October 2023]. Available from: https://dirpub.org/images/proceedings_pdf/DIRH0118022.pdf.

Banerjie, A. 2018. Decriminalising Begging Will Protect Transgender Persons From Police Harassment. *The WIRE*. [Online]. 17 August. [Accessed 2 January 2024]. Available from: https://thewire.in/rights/decriminalising-begging-will-protect-transgender-persons-from-police-harassment

Bartram, J., Brocklehurst, C., Bradley, D., Muller, M. and Evans, B. 2018. Policy review of the means of implementation targets and indicators for the sustainable development goal for water and sanitation. *npj Clean Water*. **1**(3).

Basbugoglu, D. 2020. *Politically Overlooked: LGBT People in India*. [Online]. Available from: https://www.democratic-erosion.com/2020/05/26/politically-overlooked-lgbt-people-in-india/

Basnet, S. and Hoque, M.M. 2023. Critical Analysis of the Implementation of Clean India Mission in the Rural Areas: A Gender Perspective. *Journal of Women, Politics and Policy*. **44**(3), pp.299-318.

Behal, A. 2021. *Non-binary genders need more visibility in India's Census 2021*. [Online]. [Accessed 23rd July 2023]. Available from: https://www.downtoearth.org.in/blog/governance/non-binary-genders-need-more-visibility-in-india-s-census-2021-78844

Behera, M.R., Pradhan, H.S., Behera, D., Jena, D. and Satpathy, S.K. 2021. Achievements and challenges of India's sanitation campaign under clean India mission: A commentary. *Journal of education and health promotion*. **10**(350).

Bhandari, G.S. 2021. Growing up non-binary in today's India. *The Hindu*. 30 July. Available from: https://www.thehindu.com/society/growing-up-non-binary-in-todays-india/article35625327.ece

Bhasin, S. 2016. Our community has no caste or religion: Laxmi on being a hijra. *The Hindustan Times*. [Online]. 29 January. [Accessed 10 November 2023]. Available from: https://www.hindustantimes.com/books/our-community-has-no-caste-or-religion-laxmi-on-being-a-hijra/story-bfqDSEjGKkKID7isZ7mmrM.html

Bhattacharya, S., Ghosh D and Purkayastha, B. 2022. 'Transgender Persons (Protection of Rights) Act' of India: An Analysis of Substantive Access to Rights of a Transgender Community. *Journal of Human Rights Practise*. **14**(2), pp.676–697.

Biswas, D. 2019. Challenges for Transgender-inclusive Sanitation in India. *Economic and Political Weekly*. **54**(18), pp.19-21.

Bonfert, A.T., Kilic, T., Moylan, H. and Muller, M. 2022. *Three ways to tackle gender data gaps – and 12 countries embracing the challenge*. [Online]. [Accessed 21 December 2023]. Available

from: https://blogs.worldbank.org/opendata/three-ways-tackle-gender-data-gaps-and-12-countries-embracing-challenge

Boyce, B. 2015. Sexuality and Gender Identity under the Constitution of India. *Journal of Gender, Race, and Justice.* **18**(1), pp.1-64.

Boyce, P., Brown, S., Cavill, S., Chaukekar, S., Chisenga, B., Dash, M., Dasgupta, R.K., De La Brosse, N., Dhall, P., Fisher, J., Gutierrez-Patterson, M., Hemabati, O., Hueso, A., Khan, A., Khurai, A., Patkar, A., Nath, P., Snel, M. and Thapa, K. 2018. Transgender-inclusive sanitation: insights from South Asia. *Waterlines.* **37**(2).

Boyce, P. and Dasgupta, R.K. 2019. Alternating sexualities: sociology and queer critiques in India. In: Srivastava, S., et al. eds. *Critical Themes in Indian Sociology.* New Delhi: SAGE, pp.330-345.

Boyce, P., Dhall, P., Khurai, S., Yambung, O., Pebam, B. and Lairikyengbam, R. 2021. Gender diverse equality and well-being in Manipur, North East India: Reflections on peer-led research. In: Bell, S., et al. eds. *Peer Research in Health and Social Development.* London: Routledge.

Bradley, D.J. and Bartram, J.K. 2013. Domestic water and sanitation as water security: monitoring, concepts and strategy. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences.* **371**(2002).

Brewster, M.E., Mennicke, A., Velez, B.L. and Tebbe, E. 2014. Voices From Beyond: A Thematic Content Analysis of Transgender Employees' Workplace Experiences. *Psychology of Sexual Orientation and Gender Diversity.* **1**(2), pp.159-169.

Butler, J. 2004. *Undoing Gender.* New York: Routledge.

CARE Australia. No Date. *Gender Equality Programming - Guidance Note: WASH.* Canberra, Australia: CARE Australia.

Care International. 2013. *WASH Gender Marker Tip Sheet.* London: CARE International Emergency WASH Team.

Carrard, N., MacArthur, J., Leahy, C., Soeters, S. and Willetts, J. 2022. The water, sanitation and hygiene gender equality measure (WASH-GEM): Conceptual foundations and domains of change. *Women's Studies International Forum.* **91**, p102563.

Caruso, B.A., Salinger, A., Patrick, M., Conrad, A. and Sinharoy, S. 2021. *A Review of Measures and Indicators for Gender in WASH.* Atlanta: Emory University.

Celis, K., Kantola, J., Waylen, G. and Weldon, S.L. 2013. Introduction: Gender and Politics: A Gendered World, a Gendered Discipline. *The Oxford Handbook of Gender and Politics.* [Online]. Oxford University Press. [Accessed 9/16/2022]. Available from: https://academic.oup.com/edited-volume/34874/chapter-abstract/298332615?redirectedFrom=fulltext

Chakrabarti, A. and Das, B. 2023. Recognition, citizenship and rights: the dilemma of India's gender non-conforming communities in the light of the Transgender Persons (Protection of Rights) Act. *Journal of Gender Studies.* pp.1-13.

Chakrapani, V. and Naarain, A. 2012. *Legal Recognition of Gender Identity of Transgender People in India: Current Situation and Potential Options.* New Delhi: UNDP.

Chandravanshi, N. 2021. There shouldn't be competition between centre and state, only coordination. *Times of India.* [Online]. [Accessed 6th June]. Available from:

https://timesofindia.indiatimes.com/readersblog/nishant-chandravanshi/there-shouldnt-be-competition-between-centre-and-state-only-coordination-33142/

Chatterjee, S. 2018. Transgender Shifts: Notes on Resignification of Gender and Sexuality in India. *TSQ: Transgender Studies Quarterly*. **5**(3), pp.311-320.

Chisholm, J. 2018. Muxe, Two-Spirits, and the myth of Indigenous transgender acceptance. *International Journal of Critical Indigenous Studies*. **11**(1), pp.21-35.

Chowdhary, Y. 2021. *A Case for Transgender Inclusive WASH Practices*. [Online]. [Accessed 9th November]. Available from: https://sprf.in/wsf-projects/a-case-for-transgender-inclusive-wash-practices/

Coffey, D. and Spears, D. 2017. *Where India Goes*. Noida: Harper Collins.

Colaço, R. and Watson-Grant, S. 2021. *A Global Call to Action for Gender-Inclusive Data Collection and Use*. North Carolina: RTI Press.

Curtis, V. 2019. Explaining the outcomes of the Clean India campaign: institutional behaviour and sanitation transformation in India. *BMJ Global Health*. **4**(5), pe001892.

Dart, J. and Davies, R. 2003. A dialogical, story-based evaluation tool: The most significant change technique. *American Journal of Evaluation*. **24**(2), pp.137-155.

Davis, H.F. 2018. Why the "transgender" bathroom controversy should make us rethink sex-segregated public bathrooms. *Politics, Groups, and Identities*. **6**(2), pp.199-216.

De Lauretis, T. 1991. Queer Theory: Lesbian and Gay Sexualities An Introduction. *Differences: A Journal of Feminist and Cultural Studies*. **3**.

Debnath, K. 2017. LGBT Identity: The Illustration of "Othering" in India. *Sexuality, Gender & Policy*. **1**(1), pp.89-100.

Deccan Herald. 2023. *9 years on, where are separate public toilets for transgender community in Bengaluru*. [Online]. Available from: https://www.deccanherald.com/india/karnataka/bengaluru/9-years-on-where-are-separate-public-toilets-for-transgender-community-in-bengaluru-1235317.html

Dennehy, D., Fitzgibbon, M. and Carton, F. 2014. International development: exploring the gap between organisations' development policy and practice—a Southern perspective. *AI & SOCIETY*. **29**(2), pp.221-230.

Dery, F., Bisung, E., Dickin, S. and Atengdem, J. 2021. 'They will listen to women who speak but it ends there': examining empowerment in the context of water and sanitation interventions in Ghana. *H2O Open Journal*. **4**(1), pp.231–243.

Dery, F., Bisung, E., Dickin, S. and Dyer, M. 2020. Understanding empowerment in water, sanitation, and hygiene (WASH): A scoping review. *Journal of Water Sanitation and Hygiene for Development*. **10**(1), pp.5-15.

Dutta, A. 2012. An Epistemology of Collusion: Hijras, Kothis and the Historical (Dis)continuity of Gender/Sexual Identities in Eastern India. *Gender and History*. **24**(3), pp.825-849.

Earl, S., Carden, F. and Smutylo, T. 2001. *Outcome mapping: Building learning and reflection into development programs*. Ottawa: IDRC.

Easterly, W. 2015. The SDGs Should Stand for Senseless, Dreamy, Garbled. *Foreign Policy*. [Online]. 28 September. [Accessed 1 January 2024]. Available from: https://foreignpolicy.com/2015/09/28/the-sdgs-are-utopian-and-worthless-mdgs-development-rise-of-the-rest/

Ebohon, S.I. 2012. Feminizing Development: The Political Sociology of Female Tokenism in the Nigerian Project. *African and Asian Studies*. **11**(4), pp.410-443.

Ember, C.R. and Ember, M. eds. 2004. *Encyclopedia of Sex and Gender*. New York: Springer.

Engineering Council and Royal Academy of Engineering. 2017. *Statement of Ethical Principles: for the engineering profession*. London: Engineering Council and the Royal Academy of Engineering.

Equaldex. 2023. *Legal recognition of non-binary or third gender identities*. [Online]. [Accessed 30th January 2023]. Available from: https://www.equaldex.com/issue/non-binary-gender-recognition

Esteva, G. 2010. Development. In: Sachs, W. ed. *The Development Dictionary: A Guide to Knowledge as Power*. 2nd ed. London: Zed Books.

Farran, S. and Su'a, A. 2005. Criminal law and Fa'afafine and Fakaleiti in the South Pacific. *Commonwealth Law Bulletin*. **31**(1), pp.19-31.

Ferguson, J. 1990. *The anti-politics machine: 'development', depoliticization, and bureaucratic power in Lesotho*. Cambridge: Cambridge University Press.

Financial Tracking Service. 2022. *Total reported funding 2021*. [Online]. [Accessed 20 November]. Available from: https://fts.unocha.org/global-funding/overview/2021

Financial Tracking Service. 2023. *Humanitarian aid contributions*. [Online]. [Accessed 1 January 2024]. Available from: https://fts.unocha.org/home/2021/countries

Frank, S.E. 2020. Queering Menstruation: Trans and Non-Binary Identity and Body Politics. *Sociological Inquiry*. **90**(2), pp.371-404.

Fukuda-Parr, S. 2016. From the Millennium Development Goals to the Sustainable Development Goals: shifts in purpose, concept, and politics of global goal setting for development. *Gender & Development*. **24**(1), pp.43-52.

Fukuda-Parr, S. and Smaavik Hegstad, T. 2018. "Leaving No One Behind" as a Site of Contestation and Reinterpretation. **9**(2).

Gan, Y. 2017. Decolonising Gender and Development: a personal reflection. [Online]. [Accessed 27 Sepember 2021]. Available from: https://www.ids.ac.uk/opinions/decolonising-gender-and-development-a-personal-reflection/

Gathanga, S. 2023. Limitations of the NGO discourse. In: Mwangi, N. and Maghanga, L. eds. *Breaking the Silence on NGOs in Africa*. Québec: Daraja Press, pp.58-60.

Gilmour, S., Mai, P., L, Nguyen, P., Dhungel, B., Tomizawa, M. and Nguyen, H. 2020. Progress towards Health for All: Time to End Discrimination and Marginalization. . *International journal of environmental research and public health*. **17**(5).

Glaser, B. and Strauss, A. 1967. *Discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.

Goel, I. 2018. Caste and Religion Create Barriers Within the Hijra Community. *The WIRE*. [Online]. 18 May. [Accessed 10 November 2023]. Available from: https://thewire.in/lgbtqia/caste-religion-hijra-community

Goel, I. 2022. South Asia: Introducing the Region. In: Fernandez, N.T. and Nelson, K. eds. *Gendered Lives*. New York: SUNY Press.

Goetz, A.M. 2008. *Governing Women*. 1st ed. London: Routledge.

Gonsalves, K. 2020. *No, Acknowledging That All Genders Can Menstruate Doesn't 'Erase Women'*. [Online]. [Accessed 27th October]. Available from: https://www.sheknows.com/health-and-wellness/articles/2122402/all-genders-menstruate-always-pads/

Gosh, D. 2014. Transgenders are the 'third gender', rules Supreme Court. *NDTV*. 15 April. Available from: https://www.ndtv.com/india-news/transgenders-are-the-third-gender-rules-supreme-court-557439

Gosling, L., Rai, T., Obani, P., Traore, M.A., Ouangre, L., Aliu, F. and Shah, S.K. 2022. Analysis of experience using human rights to accelerate WASH access in four countries. *H2Open Journal*. **5**(2), pp.234-247.

Government of India. 2011. *Census of India 2011: Household Schedule-Side A*. New Delhi.

Government of India. 2022a. *SMILE Scheme*. [Online]. [Accessed 9th November]. Available from: https://pib.gov.in/Pressreleaseshare.aspx?PRID=1806161

Government of India. 2022b. *Support for Marginalized Individuals for Livelihood and Enterprise (SMILE): Guidelines*. New Delhi: Ministry of Social Justice and Empowerment.

Government of India. 2022c. *Toilets Built Under Swachh Bharat Mission*. New Delhi.

Government of India. 2022d. *Union Minister for Social Justice & Empowerment Dr. Virendra Kumar launched today "SMILE-75 Initiative"*. [Online]. [Accessed 9th November]. Available from: https://pib.gov.in/PressReleasePage.aspx?PRID=1851291

Gowalla, R. and Sanctis, H. 2019. *Finally, gender-neutral restrooms for third gender community in Bengaluru*. [Online]. Available from: https://timesofindia.indiatimes.com/life-style/spotlight/finally-gender-neutral-restrooms-for-third-gender-community-in-bengaluru/articleshow/72084382.cms

Greed, C. 2019. Join the queue: Including women's toilet needs in public space. *The Sociological Review*. **67**(4), pp.908-926.

Groce, N., Kett, M., Lang, R. and Trani, J.-F. 2011. Disability and Poverty: the need for a more nuanced understanding of implications for development policy and practice. *Third World Quarterly*. **32**(8), pp.1493-1513.

Guba, E.G. and Lincoln, Y.S. 1994. Competing paradigms in qualitative research. *Handbook of qualitative research*. **2**(163-194), p105.

Hasenbush, A., Flores, A.R. and Herman, J.L. 2019. Gender Identity Nondiscrimination Laws in Public Accommodations: a Review of Evidence Regarding Safety and Privacy in Public Restrooms, Locker Rooms, and Changing Rooms. *Sexuality Research and Social Policy*. **16**(1), pp.70-83.

Heller, L. 2022. WASH services and health: syntheses and contexts. *The Lancet*. **400**(10345), pp.5-7.

Henrickson, M.A.-O., Giwa, S.A.-O., Hafford-Letchfield, T.A.-O., Cocker, C.A.-O., Mulé, N.J., Schaub, J.A.-O. and Baril, A. 2020. Research Ethics with Gender and Sexually Diverse Persons. *International Journal of Environmental Research and Public Health* **17**(18).

Hines, S. 2019. The feminist frontier: on trans and feminism. *Journal of Gender Studies*. **28**(2), pp.145-157.

Hotchandani, K.R. 2017. Problems of Transgender in India: A Study From Social Exclusion To Social Inclusion. *International Research Journal of Human Resources and Social Sciences* **4**(4).

Hueso, A. and Bell, B. 2013. An untold story of policy failure: the Total Sanitation Campaign in India. *Water Policy*. **15**(6), pp.1001-1017.

Human Rights Watch. 2016. *Stifling Dissent: The Criminalization of Peaceful Expression in India*. New York: Human Rights Watch

Hyde-Smith, L.K., Ddiba, D., Dickin, S., Kiogora, D., Mdee, A.L., Reinfelder, V., Roelich, K.E. and Evans, B.E. *Forthcoming*. Business-as-usual and fantasy planning – an analysis of equity within climate adaptation planning for sanitation in Nairobi

IDE. 2019. *Design for humans by humans*. [Online]. [Accessed 21 December 2023]. Available from: https://www.ideglobal.org/story/human-centered-design

iDE. 2022. *HCD for WASH: Resource Platform*. [Online]. Available from: https://hcdforwash.org/learn-about-3-phases/

Inter-Agency Standing Committee. 2018a. *The gender handbook for humanitarian action*. [Online]. Geneva: Inter-Agency Standing Committee.

Inter-Agency Standing Committee. 2018b. *WASH Tip Sheet*. [Online]. Geneva: Inter-Agency Standing Committee.

International Institute for Population Sciences. 2023. *National Family Helath Survey (NFHS-5)*. New Delhi: Government of India: Ministry of Health and Family Welfare.

IPSOS. 2021. *LGBT+ Pride 2021 Global Survey*. Paris: Institut Public de Sondage d'Opinion Secteur.

IWRM. 2020. *National reporting on status of IWRM implementation 2020: Country Survey Instrument for SDG Indicator 6.5.1*. London: Integrated Water Resources Management (IWRM) International.

Iyer, P. 2021. *Method in the Madness : Insights from My Career as an Insider-Outsider-Insider*. Noida: Harper Collins India.

Jacobs, S.-E., Thomas, W. and Lang, S. eds. 1997. *Two-spirit People: Native American Gender Identity, Sexuality, and Spirituality*. Illinois: University of Illinois Press.

JMP. 2018a. *Drinking Water*. [Online]. [Accessed 23 July 2020]. Available from: https://washdata.org/monitoring/drinking-water

JMP. 2018b. *Hygiene*. [Online]. [Accessed 23 July 2020]. Available from: https://washdata.org/monitoring/hygiene

JMP. 2018c. *Sanitation*. [Online]. [Accessed 23 July 2020]. Available from: https://www.washdata.org/monitoring/sanitation

JMP. 2022. *About the JMP*. [Online]. [Accessed 8th September]. Available from: https://washdata.org/how-we-work/about-jmp

JMP. 2023a. *Progress on household drinking water, sanitation and hygiene 2000-2022: special focus on gender*. New York.

JMP. 2023b. *Trends in sanitation service levels, 2000-2022*. [Online]. [Accessed 22nd August]. Available from: https://washdata.org/data/household#!/dashboard/new

Jodhka, S.S. 2017. *Caste in Contemporary India*. London: Routledge.

Johnson, A.G. 2014. Patriarchy, the System: An it, not a he, a them or an us. In: Johnson, A.G. ed. *The Gender Knot: Unravelling Our Patriarchal Legacy*. 3rd ed. Philadelphia: Temple University Press.

Joint SDG Fund. 2023. *Transforming Our World*. [Online]. Available from: https://jointsdgfund.org/who-we-are

Jones, C. and Slater, J. 2020. The toilet debate: Stalling trans possibilities and defending 'women's protected spaces'. *The Sociological Review*. **68**(4), pp.834–851.

Kandiyoti, D. 1988. Bargaining with Patriarchy. *Gender and Society*. **2**(3), pp.274–290.

Karnataka Sexual Minorities Forum V. State Of Karnataka [2015] W.P. 1397/2015:

Kaur, B. 2023. Govt Accepts Resignation of Scapegoated IIPS Director After Revoking His Suspension for Unflattering NFHS Data. *The WIRE*. [Online]. 16 October. [Accessed 19 December 2023]. Available from: https://thewire.in/government/ks-james-iips-director-resignation-nfhs-health-ministry

Kealy-Bateman, W. 2018. The possible role of the psychiatrist: The lesbian, gay, bisexual, and transgender population in India. *Indian journal of psychiatry*. **60**(4), pp.489–493.

Khan, T., Abimbola, S., Kyobutungi, C. and Pai, M. 2022. How we classify countries and people-and why it matters. *BMJ global health*. **6**(7).

Kosher, R.B.D., Houghton, L.C. and Winkler, I.T. 2023. MANstruation: A cyberethnography of linguistic strategies of trans and nonbinary menstruators. *Social Science & Medicine*. **328**, p115974.

Kothari, J. 2019. Section 377 and Beyond: A New Era for Transgender Equality? In: Meinardus, R. ed. *How Liberal is India? The Quest for Freedom in the Biggest Democracy on Earth*. [Online]. Delhi: Academic Foundation.

Krishnamurthy, M. 2022. R. Ambedkar on "Castes in India: Their Mechanism, Genesis and Development". *Neglected Classics of Philosophy, Volume 2*. [Online]. Oxford University Press, p.0. [Accessed 3/19/2024]. Available from: https://doi.org/10.1093/oso/9780190097196.003.0011

Langa, M. 2019. Prime Minister Modi declares country open defecation-free. *The Hindu*. 2nd October. Available from: https://www.thehindu.com/news/national/india-open-defecation-free-says-narendra-modi/article29576776.ece

Lankford, B., Bakker, K., Zeitoun, M. and Conway, D. 2013. Water security: Principles, perspectives and practices.

Leahy, C., Winterford, K., Nghiem, T., Kelleher, J., Leong, L. and Willetts, J. 2017. Transforming gender relations through water, sanitation, and hygiene programming and monitoring in Vietnam. *Gender and Development.* **25**(2), pp.283-301.

Learning for Justice. 2019. *Is Queer ok to sat? Here's why we use it.* [Online]. Available from: https://www.learningforjustice.org/magazine/is-queer-ok-to-say-heres-why-we-use-it

London, E. and Siddiqi, M. 2019. *Religious Liberty Should Do No Harm.* Washington, DC: Center for American Progress.

Lubis, P.Y., Shahri, B. and Ramirez, M. 2021. Human-centered design for water, sanitation, and hygiene: Insights from Jakarta. In: *SD2021: VIII Simpósio de Design Sustentável + Sustainable Design Symposium, 1-3 December 2021, Curitiba, Brazil.* Brazil: Universidade Federal do Paraná, pp.768-782.

Luegenbiehl, H.C. and Clancy, R.F. 2017. *Butterworth-Heinemann.* Oxford: Butterworth-Heinemann.

MacArthur, J., Carrard, N., Mott, J., Raetz, S., Siscawati, M. and Willetts, J. 2023. Gender equality approaches in water, sanitation, and hygiene programs: Towards gender-transformative practice. *Frontiers in Water.* **5**.

MacArthur, J., Carrard, N. and Willetts, J. 2020. WASH and Gender: a critical review of the literature and implications for gender-transformative WASH research. *Journal of Water, Sanitation and Hygiene for Development.* **10**(4), pp.818-827.

Macura, B., Foggitt, E., Liera, C., Soto, A., Orlando, A., Del Duca, L., Carrard, N., Hannes, K., Sommer, M. and Dickin, S. 2023. Systematic mapping of gender equality and social inclusion in WASH interventions: knowledge clusters and gaps. *BMJ Global Health.* **8**(1), pe010850.

Mahabelshetti, G. 2023. The Evolution of Transgender Rights in India: A Critical Analysis. *Indian Journal of Law and Legal Research* **5**(2), pp.1-11.

Mahajan, K. and Sekhri, S. 2020. *Access to toilets and violence against women.* Haryana Ashoka University.

Malan, A., Suhag, M., Gupta, P.K. and Sharma, H.R. 2023. Water, sanitation, and hygiene practices among rural households and related health impacts: a case study from some North Indian villages. *AQUA - Water Infrastructure, Ecosystems and Society.* **72**(6), pp.885-897.

Manclossi, S. 2023. *Sex and gender within the context of data collected for the Sustainable Development Goals (SDGs).* London: Office for National Statistics.

Mannell, J. 2012. 'It's just been such a horrible experience.' Perceptions of gender mainstreaming by practitioners in South African organisations. *Gender and Development.* **20**(3), pp.423-434.

Marsh, D.R., Schroeder, D.G., Dearden, K.A., Sternin, J. and Sternin, M. 2004. The power of positive deviance. *BMJ.* **329**(7475), p1177.

Martinez, L.R., Ruggs, E.N., Smith, N.A., Sawyer, K.B. and Thoroughgood, C.N. 2017. The importance of being "Me": The relation between authentic identity expression and transgender employees' work-related attitudes and experiences. *Journal of Applied Psychology.* **102**(2), pp.215-226.

Maseno, L. and Kilonzo, S., M. 2011. Engendering development: Demystifying patriarchy and its effects on women in rural Kenya. *International Journal of Sociology and Anthropology.* **3**(2).

Mathur, B. 2021. *Uttar Pradesh's First Transgender-Only Toilet Built In Varanasi.* [Online]. Available from: https://swachhindia.ndtv.com/uttar-pradeshs-first-transgender-only-toilet-built-in-varanasi-56642/

McGuire, J.K., Okrey Anderson, S. and Michaels, C. 2022. "I don't think you belong in here:" The impact of gender segregated bathrooms on the safety, health, and equality of transgender people. *Journal of Gay & Lesbian Social Services.* **34**(1), pp.40-62.

McKirdy, E. 2016. Protesters arrested during North Carolina 'bathroom bill' demonstrations. *CNN.* [Online]. 26 April. [Accessed 2 January 2024]. Available from: https://edition.cnn.com/2016/04/26/us/north-carolina-transgender-protest-arrests/index.html

Mehta, M. 2018. Public finance at scale for rural sanitation – a case of Swachh Bharat Mission, India. *Journal of Water, Sanitation and Hygiene for Development.* **8**(3), pp.359-373.

Michelraj, M. 2015. Historical Evolution of Transgender Community in India. *Asian Review of Social Sciences.* **4**(1), pp.17-19.

Ministry of Drinking Water and Sanitation. 2014. *Guidelines for Swachh Bharat Mission (Gramin).*

Ministry of Drinking Water and Sanitation. 2015. *Menstrual Hygiene Management: National Guidelines.* New Delhi: Government of India.

Ministry of Drinking Water and Sanitation. 2017a. *Guidelines on Gender Issues in Sanitation.* New Delhi: Government of India.

Ministry of Drinking Water and Sanitation. 2017b. *IEC Guidelines for States and Districts.* New Delhi: Government of India.

Ministry of Drinking Water and Sanitation. 2017c. *Swachh Bharat Mission (Gramin) Guidelines.* New Delhi: Government of India.

Ministry of Drinking Water and Sanitation. 2018a. *Guidelines for Swachh Bharat Mission (Gramin).* New Delhi: Government of India.

Ministry of Drinking Water and Sanitation. 2018b. *Swachh Bharat Mission: Building a Clean India by 2019.* New Delhi: Government of India.

Ministry of Housing & Urban Affairs. 2020. *Swachh Survekshan Urban 2020.* New Delhi: Government of India.

Ministry of Housing & Urban Affairs. 2021. *Swachh Survekshan Urban 2021* New Delhi: Government of India.

Ministry of Human Resource Development. 2014. *Swachh Bharat: Swachh Vidyalaya.* New Delhi: Government of India.

Ministry of Jal Shakti. 2020. *Swachh Survekshan Grameen 2020* New Delhi: Government of India.

Ministry of Jal Shakti. 2021. *Swachh Survekshan Grameen 2021* New Delhi: Government of India.

Ministry of Urban and Housing Affairs. 2020a. *Declaring yourCity/Town SBM ODF+ and SBM ODF++: Toolkit for Urban Local Bodies.* New Delhi: Government of India.

Ministry of Urban and Housing Affairs. 2020b. *Gender Responsive Guideline Under Swachh Bharat Mission (Urban): Issues, Solutions and Case Studies.* New Delhi: Government of India.

Ministry of Urban Development. 2014. *Guidelines for Swachh Bharat Mission (Urban).* Delhi: Government of India.

Ministry of Urban Development. 2017. *Swachh Bharat Mission - Urban.* Delhi: Government of India.

Mipro, R. 2023. 'This is not the end': Protesters return to Kansas Statehouse in wake of transgender bathroom ban. *Kansas Reflector.* [Online]. 5 May. [Accessed 2 January 2024]. Available from: https://kansasreflector.com/2023/05/05/this-is-not-the-end-protesters-return-to-kansas-statehouse-in-wake-of-transgender-bathroom-ban/

Mishra, A. 2023. Provision of Transgender Toilers: Practical or Far Fetche. *Jus Corpus Law Journal.* **3**(3).

Moser, C. 2016. Gender transformation in a new global urban agenda: challenges for Habitat III and beyond. *Environment & Urbanization* **29**(1), pp.221–236.

Mount, L. 2020. "I Am Not a Hijra": Class, Respectability, and the Emergence of the "New" Transgender Woman in India. *Gender and Society.* **34**(4), pp.620-647.

:

Nayar, K.R. 1997. Housing Amenities and Health Improvement: Some Findings. *Economic and Political Weekly.* **32**(22), pp.1275-1279.

Neog, R. 2022. *Make Educational Spaces Gender Neutral in Assam! #NoMoreHoldingMyPee.* [Online]. [Accessed 27th October]. Available from: https://www.change.org/p/make-educational-spaces-gender-neutral-in-assam-nomoreholdingmypee

NHRC. 2023. *Advisory for ensuring the welfare of Transgender Persons.* New Delhi: National Human Rights Commission.

Niazi, S. 2023. *Trans people in India demand equal access to public toilets.* [Online]. [Accessed 27th October]. Available from: https://www.reuters.com/article/india-lgbt-rights-idUSL8N37S4WX

NPTP. 2022. *Support For Marginalized Individuals For Livelihood & Enterprise: National Portal For Transgender Persons* [Online]. [Accessed 13 November 2023]. Available from: https://transgender.dosje.gov.in/Applicant/HomeN/Index

O'Rourke, E. 1992. The International Drinking Water Supply and Sanitation Decade: Dogmatic Means to a Debatable End. *Water Science & Technology.* **27**(7-8), pp.1929-1939.

Oxford English Dictionary. [Online]. 2023a. s.v. *"engineer".* 21 December 2023]. *Available From https://www.oed.com/dictionary/engineer_n?tab=factsheet#5411638*

Oxford English Dictionary. [Online]. 2023b. s.v. *"queer".* 13th November 2023]. *Available From https://www.oed.com/dictionary/queer_adj1?tab=compounds_and_derived_words*

Oxfam. 2023. *Inclusive Language Guide.* Oxford: Oxfam.

Oxfam. no date. *Ideas that work: preventing violence against women through water and sanitation interventions in early emergency response.* New Delhi: Oxfam.

Pandya, A.k. and Redcay, A. 2021. Access to health services: Barriers faced by the transgender population in India. *Journal of Gay & Lesbian Mental Health*. **25**(2), pp.132-154.

Parikh, P., Diep, L., Hofmann, P., Tomei, J., Campos, L.C., Teh, T.H., Mulugetta, Y., Milligan, B. and Lakhanpaul, M. 2021. Synergies and trade-offs between sanitation and the sustainable development goals. *UCL Open: Environment*. **3**(e016).

Patel, N. 2023. Violent Cistems: Trans Experiences Of Bathroom Spaces In: B Camminga and Matebeni, z. eds. *Beyond the Mountain*. London: Routledge.

Pathak, S. 2019. *India Just Passed A Trans Rights Bill. Why Are Trans Activists Protesting It?* [Online]. [Accessed 27th October]. Available from: https://www.npr.org/sections/goatsandsoda/2019/12/04/784398783/india-just-passed-a-trans-rights-bill-why-are-trans-activists-protesting-it

Peters, B.G. 2018. The challenge of policy coordination. *Policy Design and Practice*. **1**(1), pp.1-11.

Plan International Australia. 2014. *Gender and WASH Monitoring Tool*. [Online]. Melbourne: Plan International Australia.

Pouramin, P., Ngabhatla, N. and Miletto, M. 2020. A Systematic Review of Water and Gender Interlinkages: Assessing the Intersection With Health. *Frontiers in Water*. **2**(6).

Prakash, S., Kumar, P., Dhillon, P. and Unisa, S. 2022. Correlates of access to sanitation facilities and benefits received from the Swachh Bharat Mission in India: Analysis of cross-sectional data from the 2018 National Sample Survey. *BMJ Open*. **12**(7), pe060118.

Pundir, P. 2020. What it's Like Being Non-Binary in India, Where Everyone Uses Gendered Pronouns. *Vice*. 4 February. Available from: https://www.vice.com/en/article/y3m3pm/what-its-like-being-non-binary-in-india-where-everyone-uses-gendered-pronouns

QSR International Pty Ltd. 2018. *NVivo qualitative data analysis software Version 12*. Chadstone: QSR International Pty Ltd.

Ramirez, J. and Munar, A.M. 2022. Hybrid gender colonization: The case of muxes. *Gender, Work & Organization*. **29**(6), pp.1868-1889.

Ramôa, A.R., McConville, J., Lüthi, C. and Matos, J.S. 2017. Use of process guides for comprehensive urban sanitation technology decision-making: practice versus theory. *Water Policy*. **20**(1), pp.158-174.

Rao, L.N. 2023. *Over 100 toilets constructed for transgenders in Delhi: Govt tells High Court*. [Online].

Roaf, V., Albuquerque, C.d. and Heller, L. 2018. The human rights to water and sanitation: challenges and implications for future priorities. In: Cumming, O. and Slaymaker, T. eds. *Equality in Water and Sanitation Services*. Oxford: Routledge.

Robinson, H.J. and Barrington, D.J. 2021. Drivers of menstrual material disposal and washing practices: A systematic review. *PLOS ONE*. **16**(12), pe0260472.

Robinson, H.J., Barrington, D.J., Evans, B.E., Hutchings, P. and Narayanaswamy, L. 2024. An analysis of gender inclusion in Water, Sanitation and Hygiene (WASH) projects: Intention vs. reality. *Development Policy Review*. **42**(2), pe12741.

Ross, I., Cumming, O., Dreibelbis, R., Adriano, Z., Nala, R. and Greco, G. 2021. How does sanitation influence people's quality of life? Qualitative research in low-income areas of Maputo, Mozambique. *Social Science & Medicine*. **272**, p113709.

Routray, P., Torondel, B., Jenkins, M.W., Clasen, T. and Schmidt, W.-P. 2017. Processes and challenges of community mobilisation for latrine promotion under Nirmal Bharat Abhiyan in rural Odisha, India. *BMC Public Health*. **17**(1), p453.

Ruano, A.L., Friedman, E.A. and Hill, P.S. 2014. Health, equity and the post-2015 agenda: raising the voices of marginalized communities. *International Journal for Equity in Health*. **13**(82).

Ryan, J.M. 2020. *Trans Lives in a Globalizing World: Rights, Identities, and Politics*. London: Routledge.

Rydström, K. 2020. Degendering Menstruation: Making Trans Menstruators Matter. In: Chris Bobel, et al. eds. *The Palgrave Handbook of Critical Menstruation Studies*. Singapore: Palgrave Macmillan, pp.945-959.

Safi, M. 2018. Campaigners celebrate as India decriminalises homosexuality. *The Guardian*. [Online]. 6 September 2018. Available from: https://www.theguardian.com/world/2018/sep/06/indian-supreme-court-decriminalises-homosexuality

Safi, M. and Singh, A. 2019. 'There are few gay people in India': stigma lingers despite legal victory. *The Guardian*. [Online]. 13 March. [Accessed 21 December 2023]. Available from: https://www.theguardian.com/global-development/2019/mar/13/gay-people-india-stigma-lingers-despite-legal-victory

Saisuwan, P. 2015. Kathoey and the Linguistic Construction of Gender Identity in Thailand. In: Erez, L. and Mendes, R.B. eds. *Language, Sexuality, and Power: Studies in Intersectional Sociolinguistics*. New York: Oxford University Press.

Sandberg, H.G. 2020. *The Clean India Mission: world's largest sanitation initiative*. [Online]. Available from: https://siwi.org/latest/the-clean-india-mission-worlds-largest-sanitation-initiative/

Sanitation and Water for All. 2021. *Strengthening gender equality in access to water, sanitation and hygiene*. New York: Sanitation and Water for All,.

Save The Children. 2015. *Menstrual Hygiene Management: Operational Guidelines*. [Online]. London: Save the Children.

Scotland, J. 2012. Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English language teaching*. **5**(9), pp.9-16.

Shah, P. 2022. Critical Analysis of Transgender Persons (Protection of Rights) Act, 2019. *Indian Journal of Law and Legal Research* **4**(4), pp.1212 - 1221.

Sharma, A. 2018. A Swachh Bharat? Examining the Assumptions and Erasures of the 'Clean India Mission' Discourse *Coversations in Development Studies*. **1**(1).

Sharma, V. 2021. *He, she & them: A toilet for third gender in Delhi*. [Online]. Available from: https://timesofindia.indiatimes.com/city/delhi/he-she-them-a-toilet-for-third-gender/articleshow/83935082.cms

Toilet: Ek Prem Katha. 2017. Shree Narayan Singh. dir. India: Viacom18 Motion Pictures.

Sindall, R.C. and Barrington, D.J. 2020. Fail Fast, Fail Forward, Fail Openly: The Need to Share Failures in Development. *Journal of Trial and Error*. **1**(1).

Sinha, B.D. and Menon, P.S.K. 1996. *Environmental Sanitation Health and Panchayati Raj*. New Delhi: Concept Publishing.

Slater, J., Jones, C. and Procter, L. 2018. School toilets: queer, disabled bodies and gendered lessons of embodiment. *Gender and Education*. **30**(8), pp.951-965.

Slegh, H., Barker, G., Kimonyo, A., Ndolimana, P. and Bannerman, M. 2013. 'I can do women's work': reflections on engaging men as allies in women's economic empowerment in Rwanda. *Gender & Development*. **21**(1), pp.15-30.

Sneha P., Sinha, N., Durani, A., Patel, A. and Varghese, A. 2021. Bureaucratic Indecision and Risk Aversion in India. *Indian Public Policy Review*. **2**(6), pp.55-87.

SNV and PROTOS. 2007. *Mainstreaming gender into Water, Sanitation and Hygiene (WASH) programmes: A Training Manual for Water Professionals*. The Hague: SNV and PROTOS.

Sommer, M., Schmitt, M. and Clatworthy, D. 2017. *A toolkit for integrating Menstrual hygiene Management (mhm) into Humanitarian response: The Full Guide*. [Online]. New York: Colombia University, mailman School of Public Health and International Rescue Committee.

South Asian Translaw Database. 2016. *Karnataka Sexual Minorities Forum Vs. State Of Karnataka*. [Online]. [Accessed 2nd September]. Available from: https://translaw.clpr.org.in/case-law/karnataka-sexual-minorities-forum-vs-state-of-karnataka-ors-eunuch/#:~:text=The%20Karnataka%20Police%20Act%2C1963,%E2%80%9Cundesirable%20activities%20of%20eunuchs%E2%80%9D.

Srinivasan, S.P. and Chandrasekaran, S. 2020. Transsexualism in Hindu Mythology. *Indian journal of endocrinology and metabolism*. **24**(3), pp.235-236.

St. Pierre, E.A. 2000. Poststructural feminism in education: An overview. *International Journal of Qualitative Studies in Education*. **13**(5), pp.477-515.

Stones, R.J. 2017. Which Gender is More Concerned About Transgender Women in Female Bathrooms? *Gender Issues*. **34**(3), pp.275-291.

Strauss, A. and Corbin, J. 1998. *Basics of qualitative research techniques*. Thousand Oaks, CA: Sage.

Sugden, S. 2014. Latrine design: go in peace. *Waterlines*. **33**(3), pp.220-239.

Surtees, A. and Dyer, J. eds. 2020. *Exploring Gender Diversity in the Ancient World*. Edinburgh: Edinburgh University Press.

SWA. 2019. *Mutual Accountability Mechanism*. [Online]. [Accessed 01 February 2024]. Available from: https://www.sanitationandwaterforall.org/about/our-work/mutual-accountability-mechanism#:~:text=Accountability%20is%20central%20to%20the,and%20a%20human%20rights%20principle

SWA. 2021. *Strengthening gender equality in access to water, sanitation and hygiene*. Sanitation and Water for All.

Swales, S. 2018. Transphobia in the bathroom: Sexual difference, alterity and jouissance. *Psychoanalysis, Culture & Society*. **23**(3), pp.290-309.

The Economist. 2015. The 169 commandments: The proposed sustainable development goals would be worse than useless. *The Economist*. [Online]. 26 March. [Accessed 1 January 2024]. Available from: https://www.economist.com/leaders/2015/03/26/the-169-commandments

The Gender and Protection Cluster. No Date. *Gender and Protection Checklist: WASH*. Port Vila, Vanuatu: Ministry of Justic and Community service, Government of Vanuatu.

The Ministry of Water Resources Ethiopia. 2001. *Gender Mainstreaming Guidelines and Checklists for the Water Sector*. [Online]. Addis Ababa: The Ministry of Water Resources, Women's Affairs Department.

The New Indian Express. 2019. Kochi gets its first gender-neutral 'container' toilet. *The New Indian Express*. [Online]. 8 June. [Accessed 20 January 2024]. Available from: https://www.newindianexpress.com/cities/kochi/2019/Jun/08/kochi-gets-its-first-gender-neutral-container-toilet-1987475.html

The Times of India. 2023. *Paper woes: In 3 yrs, less than 50% got nod for transgender certificates*. [Online].

The World Bank. 2016. *Toolkit for Mainstreaming Gender in Water Operations*. Washington DC: The World Bank.

The World Bank. 2020. *World Bank Provides $425 Million to Support the Provision of Infrastructure Financing in Eastern and Southern Africa*. [Online]. [Accessed 2 November 2021]. Available from: https://www.worldbank.org/en/news/press-release/2020/06/30/world-bank-provides-425-million-to-support-the-provision-of-infrastructure-financing-in-eastern-and-southern-africa

The World Bank Group. 2019. *Partnership Fund For The Sustainable Development Goals: Annual Report 2019*. New York: World Bank Group.

Tong, A., Sainsbury, P. and Craig, J. 2007. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. **19**(6), pp.349–357.

Toomistu, T. 2022. Thinking through the s(k)in. *Indonesia and the Malay World*. **50**(146), pp.73-95.

Transgender Persons (Protection of Rights) Act. 2019. [Accessed 1 June 2023].

Tsetse, D. and Alleman, P. 2017. *Gender-responsive water, sanitation and hygiene: Key elements for effective WASH programming*. [Online]. New York: United Nations Children's Fund.

Turner, W.B. 2000. *A genealogy of queer theory*. Philadelphia: Temple University Press.

UN Water and World Health Organisation. 2022. *Strong systems and sound investments: evidence on and key insights into accelerating progress on sanitation, drinking-water and hygiene: UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) 2022 report*. Geneva: United Nations.

UNICEF. 2000. *Primary School Sanitation Research*. Kampala: UNICEF.

UNICEF. 2003. *Evaluation of Environmental Sanitation, Hygiene and Water Supply in Urban Slums and Fringes Project*. Dhaka: UNICEF.

UNICEF. 2004a. *An Assessment of the School Sanitation and Hygiene Education (SSHE) Strategy*. Dhaka: UNICEF.

UNICEF. 2004b. *Evaluation of the Strategic Sanitation and Hygiene Promotion -for Schools Pilot Projects Nkhata Bay and Kasungu Districts*. Lilongwe: UNICEF.

UNICEF. 2005a. *An Assessment of Project in Communities and Primary Schools with Recommendations for the Future*. Dili: UNICEF.

UNICEF. 2005b. *Environmental sanitation, hygiene and water supply in rural areas of bangladesh*. Dhaka: UNICEF.

UNICEF. 2005c. *Evaluation of Chittagong Hill Tracts Component of GOB UNICEF Project on Environmental Sanitation, Hygiene and Water Supply in Rural Areas*. Dhaka: UNICEF.

UNICEF. 2005d. *Evaluation of the friendly and healthy schools initiative's school sanitation and hygiene education component*. Managua: UNICEF.

UNICEF. 2005e. *Management of Rural Water Supplies in Mandera, Wajir Garissa (and Isiolo) Districts of North Eastern Province*. Nairobi: UNICEF.

UNICEF. 2005f. *Promotion of water, sanitation and hygiene education in choma, namwala, gwembe and siavonga districts*. Lusaka: UNICEF.

UNICEF. 2006a. *Evaluation of the UNICEF supported Seth Koma Water Environment & Sanitation Activities*. Phnom Penh: UNICEF.

UNICEF. 2006b. *Participatory Assessment of the School Sanitation and Hygiene Education Programme in Nepal*. Kathmandu: UNICEF.

UNICEF. 2007a. *Efficiency and Effectiveness of Point-of Use Technologies in Emergency Drinking Water: An Evaluation of PUR and Aquatab in Rural Bangladesh*. Dhaka: UNICEF.

UNICEF. 2007b. *Water and sanitation evaluation report*. Dushanbe: UNICEF.

UNICEF. 2008. *Evaluation of the School Sanitation and Hygiene Education (SSHE) project*. Dhaka: UNICEF.

UNICEF. 2009a. *Community-Led Total Sanitation (CLTS) in Cambodia*. Phnom Penh: UNICEF.

UNICEF. 2009b. *Evaluation of strategy for scaling up community led total sanitation in ghana*. Accra: UNICEF.

UNICEF. 2009c. *Evaluation report on the water safety model in Thừa Thiên Huế*. Huế: UNICEF.

UNICEF. 2009d. *Final Evaluation of the Hygiene Improvement Project: Hand Washing with Soap and Point-of-Use Water Treatment Initiative*. Lalitpur: UNICEF.

UNICEF. 2009e. *Second Performance Monitoring Mission: an integrated Approach to Guinea Worm Eradication through Water Supply, Sanitation and Hygiene in the Northern Region of Ghana*. Accra: UNICEF.

UNICEF. 2009f. *Water, sanitation, and hygiene (WASH) cluster coordination handbook: A practical guide for all those involved in the water, sanitation, and hygiene cluster*. New York: Global WASH Cluster.

UNICEF. 2010a. *Final Evaluation of EU Water Facility WASH Programme in 4 districts and 4 Municipalities*. Maputo: UNICEF.

UNICEF. 2010b. *Final Report for the assessment of Revolving Funds PRogram to improve hygiene and sanitation practise program*. Cairo: UNICEF.

UNICEF. 2011a. *ACP EU Water Facility Project - 2006-2011: Addressing water and sanitation needs of the rural poor in the context of HIV and AIDS in Zimbabwe*. Harare: UNICEF.

UNICEF. 2011b. *Evaluation of wash program 2006-10*. Phnom Penh: UNICEF.

UNICEF. 2012. *Evaluation of the Government of Ghana - UNICEF Integrated Approach to Guinea Worm Eradication through Water Supply, Sanitation and Hygiene in Northern Region, Ghana (I-WASH)*. Accra: UNICEF.

UNICEF. 2013a. *Final evaluation of the UN MDG Achievement Fund sponsored "Securing Access to Water through Institutional Development and Infrastructure" joint UNDP and UNICEF project in Bosnia and Herzegovina*. Sarajevo: UNICEF.

UNICEF. 2013b. *Managing the transition between emergency wash & development agenda: An evaluation of echo- funded water, sanitation and hygiene (urban wash- ii) project in monrovia, liberia*. Monrovia: UNICEF.

UNICEF. 2013c. *UNICEF's Strategic Plan 2014–2017: realizing the rights of every child, especially the most disadvantaged*. Geneva: United Nations Economic and Social Council.

UNICEF. 2014. *Increasing access to water, sanitation and hygiene in Suriname's rural interior*. Paramaribo: UNICEF.

UNICEF. 2015a. *End of Project Evaluation of project "Improving Access to Water, Sanitation and Hygiene (WASH) in Rural School and Communities through Capacity Development"*. Dili: UNICEF.

UNICEF. 2015b. *Final report: Impact evaluation of community-led total sanitation (CLTS) in rural Mali*. Bamako: UNICEF.

UNICEF. 2015c. *Report on Evaluation of WASH - Joint Action Plan (JAP) implementation in eight water insecure Woredas in Afar Regional state*. Afar: UNICEF.

UNICEF. 2016. *Strategy for Water, Sanitation and Hygiene 2016–2030*. New York: UNICEF.

UNICEF. 2017a. *Annual report on the implementation of the UNICEF Gender Action Plan, 2014-2017*. New York: UNICEF.

UNICEF. 2017b. *Final Evaluation Improving WASH in Solomon Islands (IWASH-SI) Project*. Suva: UNICEF.

UNICEF. 2017c. *UNICEF Gender Action Plan, 2018–2021*. New York: UNICEF.

UNICEF. 2018a. *Final evaluation of the project: "Rehabilitation of two piped water systems in Mozambique"*. Maputo: UNICEF.

UNICEF. 2018b. *Financial and Economic Impacts of the Swachh Bharat Mission in India*. New Delhi: UNICEF.

UNICEF. 2019a. *End of project evaluation for a water sanitation and hygiene project in satellite schools*. Harare: UNICEF.

UNICEF. 2019b. *Evaluation of the Community Led Total Sanitation and Hygiene Programme in Malawi*. Lilongwe: UNICEF.

UNICEF. 2019c. *An Evaluation of the Small Towns WASH Programme (STWP) in Zimbabwe (2012-2018)*. Harare: UNICEF.

UNICEF. 2019d. *Final evaluation of "Improving children's access to water and sanitation in Somalia (2015-2018)"*. Mogadishu: UNICEF.

UNICEF. 2019e. *Realizing potential: Evaluation of UNICEF's gender action plans*. New York: UNICEF.

UNICEF. 2020. *Summative Evaluation of the Enhanced and Accelerated WASH Programmes in Ghana ENHANCED Programme Evaluation – FINAL Report (March 2012 to December 2018)*. Accra: UNICEF.

UNICEF. 2021a. *Gender equality*. [Online]. Available from: https://www.unicef.org/gender-equality

UNICEF. 2021b. *Mainstreaming gender into social protection strategies and programmes: Evidence from 74 low- and middle-income countries*. New York: UNICEF.

United Nations. 1995. Beijing Declaration and Platform for Action. In: *Fourth World Conference on Women, 15 September 1995, Beijing*. Geneva: United Nations.

United Nations. 2017. *Leaving No One Behind: Equality and Non-Discrimination at the Heart of Sustainable Development Leaving No One Behind: The United Nations System Shared Framework for Action*. New York: United Nations.

United Nations. 2018. *Sustainable Development Goal 6: Synthesis Report on Water and Sanitation*. New York: United Nations.

United Nations General Assembly. 1948. *Universal Declaration of Human Rights*. GA Res 217A (III), UN Doc A/810 (10 December 1948).

United Nations General Assembly. 2010. *Resolution 64/292: The human right to water and sanitation (28 July 2010)*. [Online]. A/RES/64/292. [Accessed 14th May 2021]. Available from: https://www.un.org/waterforlifedecade/human_right_to_water.shtml

United Nations General Assembly. 2015. *Resolution 70/1: Transforming our world: the 2030 Agenda for Sustainable Development (21 October 2015)*. [Online]. A/RES/70/1. [Accessed 14th May 2021]. Available from: https://www.un.org/waterforlifedecade/human_right_to_water.shtml

United Nations General Assembly. 2016. *Resolution 70/169: The human rights to safe drinking water and sanitation (22 Feburary 2016)*. [Online]. A/RES/70/169. [Accessed 1 January 2024]. Available from: https://www.un.org/waterforlifedecade/human_right_to_water.shtml

Upadhyay, N. 2020. Hindu Nation and its Queers: Caste, Islamophobia, and De/coloniality in India. *Interventions*. **22**(4), pp.464-480.

Utting, P. 2000. Towards participatory conservation: An introduction. In: Utting, P. ed. *Forest Policy and Politics in the Philippines: the dynamics of participatory conservation*. Manila, Philippines, pp.1-10.

van den Berg, R.D., Naidoo, I. and Tamondong, S.D. 2017. *Evaluation for Agenda 2030: Providing evidence on progress and sustainability*. New York: United Nations Development Program.

van Eerdewijk, A. and Davids, T. 2014. Escaping the mythical beast: Gender mainstreaming reconceptualised. *Journal of International Development*. **26**(3), pp.303-316.

van Welie, M.J. and Romijn, H.A. 2018. NGOs fostering transitions towards sustainable urban sanitation in low-income countries: Insights from Transition Management and Development Studies. *Environmental Science and Policy*. **84**, pp.250-260.

VerKuilen, A., Sprouse, L., Beardsley, R., Lebu, S., Salzberg, A. and Manga, M. 2023. Effectiveness of the Swachh Bharat Mission and barriers to ending open defecation in India: a systematic review. *Frontiers in Environmental Science*. **11**.

Wajihudin, M. 2022. Mumbai: 'First exclusive transgender toilet an inclusive mov .. *Times of India*. 28th March Available from: http://timesofindia.indiatimes.com/articleshow/90482166.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

WaterAid. 2017. *Quality and Sustainability of Toilets: A Rapid Assessment of Technologies under Swachh Bharat Mission - Gramin*. New Delhi: WaterAid.

WaterAid. 2018. *Female-friendly public and community toilets: a guide for planners and decision makers*. [Online]. London: WaterAid.

WaterAid. 2020. *Practical guidance to address gender equality while strengthening water, sanitation and hygiene systems*. Melbourne: Water Aid.

Wayland, J. 2018. Constraints on foreign aid effectiveness in the water, sanitation, and hygiene (WaSH) sector. *Journal of Water, Sanitation and Hygiene for Development*. **8**(1), pp.44-52.

Wayland, J. 2019. Constraints on aid effectiveness in the water, sanitation, and hygiene (WASH) sector: evidence from Malawi. *African Geographical Review*. **38**(2), pp.140-156.

WHO. 2021. *Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs*. Geneva: WHO and UNICEF.

WHO. 2022. *UN-Water Global Analysis And Assessment Of Sanitation And Drinking-Water: Data Portal*. New York: World Health Organisation.

Wieboldt, E. 2022. *Redefining the Word "Queer"*. [Online]. Available from: https://ucsdguardian.org/2022/05/08/redefining-the-word-queer/

Woolthuis, R.K., Lankhuizen, M. and Gilsing, V. 2005. A system failure framework for innovation policy design. *Technovation*. **25**(6), pp.609-619.

World Bank. 2001. *Implementing Gender Equality at the World Bank*. Washington DC: The World Bank.

World Bank. 2006a. *Project Performance Assessment Report: Ghana: Urban Environmental Sanitation Project, Village Infrastructure Project, and Second Community Water and Sanitation Project*. Washington, DC: World Bank.

World Bank. 2006b. *Project Performance Assessment Report: Nigeria: National Water Rehabilitation Project, First Multi-State Water Supply Project, and Small Towns Water Supply and Sanitation Pilot Project*. Washington, DC: World Bank.

World Bank. 2006c. *Project Performance Assessment Report: Yemen: Land and Water Conservation Project, Taiz Water Supply Pilot Project, and Sana'a Water Supply and Sanitation Project*. Washington, DC: World Bank.

World Bank. 2008. *Project Performance Assessment Report: Nepal: Rural Water Supply And Sanitation Project*. Washington, DC: World Bank.

World Bank. 2009a. *Project Performance Assessment Report: Morocco: Lakhdar Watershed Management Pilot Project* Washington, DC: World Bank.

World Bank. 2009b. *Project Performance Assessment Report: Republic of The Philippines: Water Districts Development Project.* Washington, DC: World Bank.

World Bank. 2011a. *An IEG Comparative Review of Two Rural Water Supply And Sanitation Projects In Latin America And The Caribbean Based On Project Performance Assessments Of: Paraguay 4th Rural Water Supply and Sanitation Project and A Rural and Small Towns Water Supply and Sanitation Project In Ecuador.* Washington, DC: World Bank.

World Bank. 2011b. *Project Performance Assessment Report: Ecuador: Rural And Small Towns Water Supply And Sanitation Project (Praguas).* Washington, DC: World Bank.

World Bank. 2013. *Project Performance Assessment Report: Republic Of India: Kerala Rural Water Supply and Environmental Sanitation Project "Jalanidhi" and Maharashtra Rural Water Supply And Sanitation Project "Jalswarajya".* Washington, DC: World Bank.

World Bank. 2015. *Project Performance Assessment Report: Senegal: Long Term Water Sector Project and Supporting Access to On-Site Sanitation Services Through Output-Based Aid Scheme.* Washington, DC: World Bank.

World Bank. 2016a. *Project Performance Assessment Report: Brazil: Rural Poverty Reduction and Community Driven Development Lessons from Ceará and Santa Catarina Projects.* Washington, DC: World Bank.

World Bank. 2016b. *Project Performance Assessment Report: Ghana: Second Urban Environmental Sanitation Project and Small Towns Water Supply and Sanitation Project, Second Phase of APL.* Washington, DC: World Bank.

World Bank. 2016c. *Project Performance Assessment Report: Peru: Lima Water Rehabilitation and Management Project and National Rural Water Supply and Sanitation Project.* Washington, DC: World Bank.

World Bank. 2016d. *Project Performance Assessment Report: Zambia: Water Sector Performance Improvement Project.* Washington, DC: World Bank.

World Bank. 2017a. *Project Performance Assessment Report: Nepal—Second Rural Water Supply and Sanitation Project.* Washington, DC: World Bank.

World Bank. 2017b. *Project Performance Assessment Report: Sri Lanka—Second Community Water Supply and Sanitation Project.* Washington, DC: World Bank.

World Bank Group. 2015. *World Bank Group Gender Strategy (FY16-23) : Gender Equality, Poverty Reduction and Inclusive Growth.* Washington DC: World Bank.

World Bank Group. 2020a. *Mid-Term Review of the World Bank Group's Gender Strategy*

(FY16–23). Washington DC: World Bank.

World Bank Group. 2020b. *The World Bank In Gender.* [Online]. [Accessed 17 March 2021]. Available from: https://www.worldbank.org/en/topic/gender/overview#3

World Vision. 2023. *Integrating Gender Equality and Social Inclusion in Water, Sanitation and Hygiene: GESI and WASH: A Reference Guide.* Washington, DC: World Vision.

WSP. 2010. *Mainstreaming gender in water and sanitation. Water and Sanitation Program Working Paper.* [Online]. Washington, DC: The Water and Sanitation Program.

Yasir, S. and Travelli, A. 2023. India's Top Court Rejects Gay Marriage, While Voicing Sympathy. *The New York Times*. [Online]. 17 October. [Accessed 21 December 2023]. Available from: https://www.nytimes.com/2023/10/17/world/asia/india-same-sex-marriage.html

Zahra, K. and Zafar, T. 2015. Marginality as a Root Cause of Urban Poverty: A Case Study of Punjab. *The Pakistan Development Review*. **54**(4), pp.629-648.

Zamfira, A., de Montlibert, C. and Radu, D. eds. 2018. *Gender in Focus: Identities, Codes, Stereotypes and Politics*. 1 ed. Verlag Barbara Budrich.

9 APPENDICIES

9.1 APPENDIX A: CONSENT FORMS

For Chapter 3's survey, a content notice was added to the first page of the work, indicating participants had given consent for the study if they chose to progress through the survey.

Prior to formalising KIIs and FGDs (Chapter 5 and 6), consent forms were sent out to interviewees and focus group moderators. These documents had to be signed before a discussion was allowed to take place.

All participants (across survey, KIIs and FGDs) were reassured they would be able to withdraw from the study if they requested to, and could also have the consent forms (as well as Participant Information and Privacy Notices) in multiple languages if preferred.

9.1.1 Appendix A.1: Chapter 3 Consent Notice

By continuing with this survey, you acknowledge that:

I. You are 18 years of age or over
II. Your participation in the study is voluntary
III. You are aware that you are able to stop the survey at any time, and can request the Principal Investigator withdraw your answers after submission
IV. You are giving consent for your answers to be used for the purposes of the Principal Investigator's PhD research

9.1.2 Appendix A.2: Chapter 5 Consent Form

The following document is written in English, available in Hindi, and is available to be translated into further languages upon request. If additional language is needed, please contact the Lead Author (Hannah Robinson) at cn16hjr@leeds.ac.uk

Consent to take part in:

"What Does Successful Sanitation Look Like: Dismantling Gender Guidance and Implementation in Indian Water and Sanitation Missions"

Add your initials next to the statement if you agree

I confirm that I have read and understand the information sheet dated 24.02.2022 explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw until data analysis begins on 01.07.2022 without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. If for any reason I want to withdraw, I will email the lead researcher: Hannah Robinson – cn16hjr@leeds.ac.uk	
I consent for the interview to be audio-recorded.	
I understand that members of the research team will have access to my anonymised responses; my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.	
I understand that in the instance a focus group is held, full anonymity cannot be guaranteed on behalf of the other focus group participants.	
I understand that the data collected from me will be stored by the University of Leeds for 3 years, and could potentially be used in relevant future research – this data will remain anonymous when uploaded.	
I understand that relevant sections of the data collected during the study, may be looked at by individuals from the University of Leeds or from regulatory authorities where it is relevant to my taking part in this research.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

Name of participant / Moderator:		
Participant/Moderator's Signature:		
Date		
Researchers:	*(Translator/Implementing Partner)*	Hannah Robinson *(Principle Researcher)*
Signature:		
Date*:		

*To be signed and dated in the presence of the participant.

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, the letter/ pre-written script/ information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be kept with the project's main documents which must be kept in a secure location.

9.1.3 Appendix A.3: Chapter 6 Consent Form

The following document is written in English, available in Hindi, and is available to be translated into further languages upon request. If additional language is needed, please contact the Lead Author (Hannah Robinson) at cn16hjr@leeds.ac.uk

Consent to take part in:

"What Does Successful Sanitation Look Like: Dismantling Gender Guidance and Implementation in India"

Add your initials next to the statement if you agree

I confirm that I have read and understand the information sheet dated 26.10.2022 explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw until data analysis begins on 31.05.2023 without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. If for any reason I want to withdraw, I will email the lead researcher at the following address: Hannah Robinson – cn16hjr@leeds.ac.uk	
I consent for the interview to be audio-recorded.	
I understand that members of the research team will have access to my anonymised responses; my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.	
I understand that in the instance a focus group is held, full anonymity cannot be guaranteed on behalf of the other focus group participants.	
I understand that the data collected from me will be stored by the University of Leeds for 3 years, and could potentially be used in relevant future research – this data will remain anonymous when uploaded.	
I understand that relevant sections of the data collected during the study, may be looked at by individuals from the University of Leeds or from regulatory authorities where it is relevant to my taking part in this research.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

Name of participant / Moderator:		
Participant/Moderator's Signature:		
Date:		
Researchers:	*(Translator/Implementing Partner)*	Hannah Robinson *(Principle Researcher)*
Signature:		
Date*:		

*To be signed and dated in the presence of the participant.

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, the letter/ pre-written script/ information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be kept with the project's main documents which must be kept in a secure location.

9.2 APPENDIX B: PARTICIPANT INFORMATION

The following Participant Information Notices were given before the collection of empirical data, for Chapter 3 the information was given on the first page of the survey, for Chapter 5 it was given to interviewees in-person or virtually before interviews, and for Chapter 6 it was given to interviewees and focus groups moderators before discussions began.

9.2.1 Appendix B.1: Chapter 3 Participant Information

Part 1: Participant Information Sheet

General Information:

The survey should take you around 10-15 minutes to complete. Your participation in this research is voluntary. The Principal Investigator of this study (Hannah Jayne Robinson) can be contacted at cn16hjr@leed.ac.uk. You can stop filling in the survey at any time. After submitting your responses, you can withdraw these by using the identifier you supply on the concluding page, if you wish to do this, please contact the Principal Investigator.

This survey will be open until 1st July.

Title of Research Project:

"What Does Successful Sanitation Look Like: Interrogating Gender Guidance and Implementation"

Purpose of Survey:

The data collected in this survey will be used to gauge relevance by for previously identified barriers prohibiting gender equity in water, sanitation and hygiene (WASH) programming and policies.

Results from this survey will be disseminated via academic papers, blog posts and my PhD Thesis (due to be completed 2023); you can choose to be contactable at the end of the survey if you wish to receive updated about this work.

This survey is for individuals who have experience working with gender-related themes within WASH projects, policies and guidelines. It is being distributed through personal PhD Networks, the University of Leeds Water Hub, the Gender and Development Network, and is aiming to reach a minimum of 30 individuals.

9.2.2 Appendix B.2: Chapter 5 Participant Information Sheet

The following document is written in English, available in Hindi, and is available to be translated into further languages upon request. If additional language is needed, please contact the Lead Author (Hannah Robinson) at cn16hjr@leeds.ac.uk

The title of the research project

"What Does Successful Sanitation Look Like: Dismantling Gender Guidance and Implementation in National programs in India"

Invitation paragraph

You have been invited to take part in a PhD Research Project, before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the project?

The aim of the research project is to document and analyse what a successful national water and sanitation program looks like, and the prevalence of gendered aspects within these (focusing on Swachh Bharat and Jal Jeevan Missions). The project seeks to find the reasons for success and failure of gender related aspects in national sanitation programming: collecting personal experience of gender implementation through anonymous interviews will investigate the reasons for poor uptake of gender inclusion, or what drivers lead to more successful outcomes.

By interviewing academics, water and sanitation practitioners, and government personnel I hope to be able to understand how and if gendered aspects have failed, or been successful, and what the root causes of each outcome are. This data collection is part of a 4 year PhD at the University of Leeds, UK, and involves 8 weeks of in-country observation and interviews, followed by online discussions for those unable to be reached during the fieldwork.

Why have I been chosen?

You have been chosen as you have knowledge of Water and/or Sanitation Projects in the Indian context, with particular reference to the National Missions such as Swachh Bharat and

Jal Jeevan. Other participants are to be recruited through snowball sampling, recommendations from previous participants and current personal networks.

Do I have to take part?

Taking part in the research is entirely voluntary and refusal to agree to participate will involve no penalty. You may discontinue participation at any time without penalty, and may withdraw your personal data and interview answers until anonymization of all data prior to analysis on 01.09.2022, at which point the lead researcher will do their best to remove responses, but cannot guarantee this.

If you decide to take part, you will be given this document, along with the adjoining Research Participant Privacy Notice and Consent Form, these are available immediately in your choice of English or Hindi (if another language is preferable please make that clear to the researcher who will source a translation.)

What do I have to do?

You will be asked to partake in a one-off interview lasting up to 1 hour. Where possible I will travel to you, to conduct the interview at an office/work environment – if this is not possible we shall either conduct the discussion online or at another location both the participant and the researcher agree on.

Questions will be open-ended to discuss experiences related to designing, implementing and managing national sanitation programs, with particular reference to gendered attributes and mainstreaming.

What are the possible disadvantages and risks of taking part?

At present the researcher does not foresee any discomforts, disadvantages or risks in taking part, however if you do have any reservations before, during or after, you may air these freely.

What are the possible benefits of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that by adding to this discussion you will help inform the current body of literature surrounding gender inclusion in national programming, hopefully then specifying areas of concern or success.

Use, dissemination and storage of research data

Data shall be collected in the form of audio recorders, and interview notes during the conversation. Following the interview, hard copies of interview notes will be scanned, anonymised and then shredded. Transcripts will be anonymised, and stored securely on University of Leeds server, and a secure USB.

There are plans to publish this research once completed, as part of the PhD Degree, but any and all quotes will be anonymised as to not allow for individual identification of participants. All anonymised data will be stored on the server for 3 years to allow constant access throughout the end of the degree.

Will I be recorded, and how will the recorded media be used?

Permission to be audio-recorded for the interviews is required, and consent for this is noted on the consent forms. The audio recordings shall be used purely for analysis, they will be given pseudonyms for anonymity, no other use shall be made of them without explicit written permission, and no one outside of the immediate research team has access to these files. Pseudymns and Original name shall be stored in a separate password protected document until 1st September 2022 (at which point participants are unable to withdraw), where the original names shall be deleted to preserve anonymity of data.

What will happen to my personal information?

The only personal information needed for this project initially is a Full name, email address and job title.

For publication, and in the PhD Thesis, specific quotes from participants will be anonymous, but a simplification of a job title will be used (no gender, name, or age attached) in order to contextualise opinions.

E.g. "……." (Government Personnel, Telangana)

E.g. "……." (WASH Practitioner, Delhi)

What will happen to the results of the research project?

All the contact information collected about you during the course of the research will be kept strictly confidential and will stored separately from the research data. Steps will be taken wherever possible to anonymise the research data so that you will not be identified in any reports or publications.

It is unlikely due to the nature of the research that topics depicting harm, abuse, admittance of illegal activities or any other dangerous item will come up, however, if they do, the researcher has a responsibility to report this.

Results are likely to be published by the end of 2023, upon the completion of the PhD this research is being collected for. Upon publication, private and individual emails shall be sent out to all participants detailing the results.

What type of information will be sought from me and why is the collection of this information relevant for achieving the research project's objectives?

You will be asked questions relating to your experience working in and around sanitation programs, with an emphasis on gender and general accessibility. There is already a wealth of research documenting the success of the Swachh Bharat Missions, however less documentation refers to the specific success and failures relating to the gendered attributes of the program that go beyond completion of facility construction.

Who is organising/ funding the research?

The lead researcher is being supported by the UK's Engineering and Physical Science Research Council (EPSRC), through the Water-WISER Centre for Doctoral Training.

Contact for further information

Should you want to contact the researcher for any reason, do so at the stated address:

Hannah Robinson cn16hjr@leeds.ac.uk

The Privacy Notice for Research (Appendix 3) *will be provided alongside this Participant Information Sheet.*

9.2.3 Appendix B.3: Chapter 6 Participation Information Sheet

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The following document is written in English, available in Hindi, and is available to be translated into further languages upon request. If additional language is needed, please contact the Lead Author (Hannah Robinson) at cn16hjr@leeds.ac.uk

This form was created 26.10.22 and is the most recent version of this document.

The title of the research project

"What Does Successful Sanitation Look Like: Dismantling Gender Guidance and Implementation in India"

Invitation paragraph

You have been invited to take part in a PhD Research Project, before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the project?

The aim of the research project is to document and analyse the way transgender and third gender communities' access water and sanitation services By interviewing academics, water and sanitation practitioners, government personnel, and especially transgender individuals, I hope to be able to understand how and if gendered aspects have been a lesser focus of the government programs to date. This data collection is part of a 4 year PhD at the University of Leeds, UK, and involves 3 weeks of in-country observation and interviews.

Why have I been chosen?

You have been chosen as you have knowledge of Transgender Rights in the context of India~~,~~. Other participants are to be recruited through snowball sampling, recommendations from previous participants and current personal networks.

Do I have to take part?

Taking part in the research is entirely voluntary and refusal to agree to participate will involve no penalty. You may discontinue participation at any time without penalty, and may

withdraw your personal data and interview answers until anonymization of all data prior to analysis on 31.05.23.

If you decide to take part, you will be given this document, along with the adjoining Research Participant Privacy Notice and Consent Form, these are available immediately in your choice of English or Hindi (if another language is preferable please make that clear to the researcher who will source a translation.)

What do I have to do?

You will be asked to partake in a one-off 1 hour interview/focus group. Where possible I will travel to you, to conduct the interview at an office/work environment – if this is not possible we shall either conduct the discussion online or at another location both the participant and the researcher agree on.

Questions will be open-ended to discuss experiences related to designing, implementing and managing sanitation systems, with particular reference to latrines and the Swachh Bharat Mission.

What are the possible disadvantages and risks of taking part?

At present the researcher does not foresee any discomforts, disadvantages or risks in taking part, however if you do have any reservations before, during or after, you may air these freely.

What are the possible benefits of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that by adding to this discussion you will help inform the current body of literature surrounding Sanitation Programs, hopefully to specify and improve areas of concern or success in relation to gendered attributes.

Use, dissemination and storage of research data

Data shall be collected in the form of audio recorders, and interview notes during the conversation. Following the interview, hard copies of interview notes will be scanned, anonymised and then shredded. Transcripts will be anonymised, and stored securely on University of Leeds server, and a secure USB.

There are plans to publish this research once completed, as part of the PhD Degree, but any and all quotes will be anonymised as to not allow for individual identification of participants. All anonymised data will be stored on the server for 3 years to allow constant access throughout the end of the degree.

Will I be recorded, and how will the recorded media be used?

Permission to be audio-recorded for the interviews is required, and consent for this is noted on the consent forms. The audio recordings shall be used purely for analysis, they will be given pseudonyms for anonymity, no other use shall be made of them without explicit written permission, and no one outside of the immediate research team has access to these files. Pseudymns and Original name shall be stored in a separate password protected document until 31st May 2023 (at which point participants are unable to withdraw), where the original names shall be deleted to preserve anonymity of data.

What will happen to my personal information?

The only personal information needed for this project initially is a First name (which will later be pseudonymised), and gender identity. For publication, and in the PhD Thesis, specific quotes from participants will be anonymous:

E.g. "……." (Transgender Woman, Delhi)

What will happen to the results of the research project?

All the contact information collected about you during the course of the research will be kept strictly confidential and will stored separately from the research data. Steps will be taken wherever possible to anonymise the research data so that you will not be identified in any reports or publications.

It is unlikely due to the nature of the research that topics depicting harm, abuse, admittance of illegal activities or any other dangerous item will come up, however, if they do, the researcher has a responsibility to report this.

Results are likely to be published by the end of 2023, upon the completion of the PhD this research is being collected for. Upon publication, private and individual emails shall be sent out to all participants detailing the results.

What type of information will be sought from me and why is the collection of this information relevant for achieving the research project's objectives?

You will be asked questions relating to your experience working in and around transgender rights, with a focus on how water and sanitation programs satisfy the needs of this specific community. There is already a wealth of research documenting the success of the Swachh Bharat and Jal Jeevan Missions, however less documentation refers to the specific success and

failures relating to the gendered attributes of the program that go beyond completion of facility construction.

Who is organising/ funding the research?

The lead researcher is being supported by the UK's Engineering and Physical Science Research Council (EPSRC), through the Water-WISER Centre for Doctoral Training.

Contact for further information

Should you want to contact the researcher for any reason, do so at the stated address:

Hannah Robinson cn16hjr@leeds.ac.uk

The Privacy Notice for Research will be provided alongside this Participant Information Sheet.

9.3 APPENDIX C: RESEARCH PRIVACY NOTICE

The same Research Privacy Notice was given to participants in both Chapter 5 and Chapter 6. Interviewees read and agreed to the terms before proceeding, focus groups moderators read and agreed to the terms on behalf of the FGD participants.

The following document is written in English, available in Hindi, and is available to be translated into further languages upon request. If additional language is needed, please contact the Lead Author (Hannah Robinson) at cn16hjr@leeds.ac.uk

Purpose of this Notice

This Notice explains how and why the University uses personal data for research; what individual rights are afforded under the Data Protection Act 2018 (DPA) and who to contact with any queries or concerns.

All research projects are different. This information is intended to supplement the specific information you will have been provided with when asked to participate in one of our research projects. The project specify information will provide details on how and why we will process your personal data, who will have access to it, any automated decision-making that affects you and for how long we will retain your personal data.

Why do we process personal data?

As a publicly funded organisation we undertake scientific research which is in the public interest. The DPA requires us to have a legal basis for this processing; we rely upon "the performance of a task carried out in the public interest" as our lawful basis for processing personal data, and on "archiving in the public interest, scientific or historical research purposes, or statistical purposes" as our additional lawful basis for processing special category personal data (that which reveals racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic or biometric data, and data concerning health, sex life or sexual orientation).

How do we follow data protection principles?

I. We have lawful bases for processing personal and special category data.
II. Data are used fairly and transparently; we will make it clear to individuals what their data will be used for, how it will be handled and what their rights are.
III. We only collect and use personal data for our research, for research in the public interest, or to support the work of our organisation.

IV. We only collect the minimum amount of personal data which we need for our purposes.
V. We take steps to ensure that the personal data we hold is accurate.
VI. We keep your personal data in an identifiable format for the minimum time required.
VII. We take steps to ensure that your data is held securely.
VIII. We keep a record of our processing activities.

What do we do with personal data?

Research data can be a very valuable resource for improving public services and our understanding of the societies we live in. One way we can get the most benefit from this work is to make the data available, usually when the research has finished, to other researchers. Sometimes these researchers will be based outside the European Union. We will only ever share research data with organisations that can guarantee to store it securely. We will never sell your personal data, and any data shared cannot be used to contact individuals.

The project specific information will include more detail about how your data will be used.

Your rights as a data subject

Because we use personals data to support scientific research on the public interest, individuals participating in research do not have the same rights regarding their personal data as they would in other situations. This means that the following rights are limited for individuals who participate, or have participated in, a research project:

I. The right to access the data we hold about you.
II. The right to rectify the data we hold about you.
III. The right to have the data we hold about you erased.
IV. The right to restrict how we process your data.
V. The right to data portability.
VI. The right to object to us processing the data we hold about you.

Data security

We have put in place security measures to prevent your personal data from being accidentally lost, used or accessed in an unauthorised way and will notify you and any applicable regulator of a suspected breach where we are legally required to do so.

Retention periods

We will only retain your identifiable personal information for as long as necessary to fulfil the purposes we collected it for; we may then retain your data in anonymised or pseudonymised format. To determine the appropriate retention period for personal data we consider the amount, nature, and sensitivity of the personal data, the potential risk of harm from unauthorised use or disclosure, the purposes for which we process your personal data and whether we can achieve those purposes through other means, and the applicable legal requirements.

Communication

In the first instance please contact the researcher who your initial contact was with (Hannah Robinson, cn16hjr@leeds.ac.uk). You may also contact the Data Protection Officer for further information (see contact details below).

Please see the Information Commissioner's website for further information on the law) - You have a right to complain to the Information Commissioner's Office (ICO) about the way in which we process your personal data. Please see the ICO's website.

Concerns and contact details

If you have any concerns with regard to the way your personal data is being processed or have a query with regard to this Notice, please contact our Data Protection Officer (Alice Temple: A.C.Temple@leeds.ac.uk).

Our general postal address is University of Leeds, Leeds LS2 9JT, UK.

Our postal address for data protection issues is University of Leeds Secretariat, Room 11.72 EC Stoner Building, Leeds, LS2 9JT.

Our telephone number is +44 (0)113 2431751.

Our data controller registration number provided by the Information Commissioner's Office is Z553814X.

This notice was last updated on 20 February 2019

9.4 APPENDIX D: RESEARCH GUIDES

For Chapter 3, this includes the questions used in the online consensus moderation survey, designed by Hannah Robinson and Paul Hutchings.

For Chapter 5, this includes the interview guide used for the 22 KIIs and the 2 participant focus groups. The guide was a list of potential questions, designed by Hannah Robinson and Barbara Evans, it was used to prompt discussions, and was not used as a definitive list.

For Chapter 6, this includes the interview guide for the 6 KIIs, and the focus group guide for the 2 FGDs. The KII guide was designed by Hannah Robinson, and the FCD guide designed by Hannah Robinson, Dani Barrington and Ravikirankumar Bokam. Both were listed potential questions, and were used to prompt discussions, and were not used as a definitive list.

9.4.1 Appendix D.1: Chapter 3 Consensus Moderation Survey Questions

Question 1: What is your gender?

Man / Woman / Non-Binary / Prefer not to say / Other

Question 1a: If you selected Other, please specify

Question 2: On which continents do you have experience working with WASH and gender-related programmes/elements?

Asia / Africa / Europe / North America / Oceania / South America

Question 2a: Do you have experience specifically in the Indian Context?

Yes / No

Question 3: In which sectors do you have experience working? (tick all that apply)

Academia / Charity Sector / Governmental (Local) / Governmental (National) / Non-Governmental Organisation / Utility Company

Question 3a: In which sectors do you currently work? (Choose one)

Academia / Charity Sector / Governmental (Local) / Governmental (National) / Non-Governmental Organisation / Utility Company

Question 4: Do you have prior experience working with elements of gender AND WASH (Water, Sanitation and Hygiene)?

Yes / No [If no, survey ends here]

Question 5: Is gender equity a key concern for WASH in your view/experience?

Yes / No

Question 5a: Optional Comment:

Question 6: In your experience, who does 'gender' in your work refer to? (tick all that apply)

Women / Girls / Men / Boys / LGBTQ+ Persons* / Other

Question 6a: If you selected Other, please specify

Question 6b: Optional Comment: …

Question 7: In your experience, who is included in discussions about gender? (tick all that apply)

Women / Girls / Men / Boys / LGBTQ+ Persons* / Other

Question 7a: If you selected Other, please specify:

Question 7b: Optional Comment:

Question 8: If you use gender guidelines in your work, which ones do you use? (tick all that apply)

Company specific (internal document) / International NGO (e.g. WaterAid) / Local Government / National Government / UN Documents / World Bank / Other / Do not use

Question 8a: If you selected Other, please specify:

Question 8b: Optional Comment:

Question 9: What is the requirement to use the above documents in your work?

Mandatory / Heavily Advised / Optional / Not required / Not applicable for my work

Question 9b: Optional Comment:

Question 10: Do you think the use of these documents leads to better gender equity outcomes?

Yes / Occasionally / No / I don't know / N/A (I do not use these documents)

Question 10b: Optional Comment:

Question 11: What are, in your view, the key challenges, if any, of putting in place gender equitable WASH policies/practice? (tick all that apply)

I. All genders are not involved in designing projects/policies
II. All genders are not involved in implementing projects/policies
III. There is limited targeted funding for gender equity in WASH
IV. Gender-related targets are not a priority when designing
V. There is lack of accountability for monitoring gender-related targets
VI. There is a lack of involvement from Gender Specialists when designing projects/ policies
VII. Projects/Policies lack informed education work/campaigns to accompany work
VIII. 'gender' is seen as 'women's work, and often excludes men
IX. Triple role of Women is not considered when attributing additional responsibilities
X. There is a lack of recognition of gender equity being a 'serious' attribute in projects/policies
XI. Other

Question 11a: If you selected Other, please specify:

Question 11b: Optional Comment:

Question 12: Please state how much you agree/disagree with the following statements, based on your experiences working with WASH projects and policies.#

Question 12.1: Gender is not considered holistically in policies and programming e.g. only considered in one section of a project, not throughout

Strongly Agree / Agree / Indifferent / Disagree / Strongly Disagree / Unsure / NA

Question 12.2: Gender often fails to acknowledge the existence of transgender, non-binary and other minority genders

Strongly Agree / Agree / Indifferent / Disagree / Strongly Disagree / Unsure / NA

Question 12.3: There is lack of funding available in WASH for gender-related items e.g. projects/targets/jobs…

Strongly Agree / Agree / Indifferent / Disagree / Strongly Disagree / Unsure / NA

Question 12.4: Gender related funding often gets redistributed to other 'priority areas'

Strongly Agree / Agree / Indifferent / Disagree / Strongly Disagree / Unsure / NA

Question 12a: Optional Comment:

Question 13: Are there any potential barriers not highlighted here that you think are relevant for this work?

Question 14: If you have had an experience of successfully incorporating gender equity into your WASH work, what did this involve? (tick all that apply)

- Equitable involvement of all genders in designing projects/policies
- Equitable involvement of all genders in implementing projects/policies
- Involvement of Gender Specialists when designing projects/ policies
- Specific gender-related funding was available
- Active efforts were made to educate project/policy beneficiaries
- Gender-related targets were created and measured
- Other

Question 14a: Optional Comment:

Question 15: Are there any comments, experiences, or other items not already covered that you would like to share in relation to this work that helps to investigate challenges in achieving gender equity in WASH?

Question 16: Please type below an anonymous identifying word/phrase, so if your responses need to be removed from this survey they can be found without issue.

Question 17: Would you like to be notified of results relating to this survey and future related work?

Question 17a: Please type in an email address you are happy to be contacted at:

9.4.2 Appendix D.2: Chapter 5 Guide for Key Informant Interviews

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Interview Guide:

- What elements contribute to accessibility when designing sanitation systems?
    - *How do you think gender, disability and caste fit into design plans?*
    - *What do you see as gendered WASH considerations?*

- Do you believe India is open defecation free, and why?

- How do you design sanitation systems?
    - We've talked about technical attributes, what about social attributes?
    - *Are you able to make individual choices about individual fittings?*
    - *How do you make decisions about fittings (lighting, MHM, doors, toilet height)*

- What challenges have you come across when designing and implementing projects?

- What are the incentives to make accessible sanitation systems?

- There are three legally registered genders in India, do you think they all get considered in sanitation?
    - *Do you think there is a focus on one particular gender, if so, why?*
    - *How do the three legally recognised genders differ in inclusion criteria?*

9.4.3 Appendix D.3: Chapter 6 KII & FGD Guides

Interview Guide:

Part 1: Background
- Can you begin by telling me more about your background?
    - *For clarity, what is the relationship between you & the Government of India?*
    - *How would you define your gender identity?*
    - *What experience do you have working with transgender individuals?*
    - *What experience do you have working with gender, water and sanitation?*
    - *Which states have you predominantly worked in?*
    - *Do you have more of an Urban or Rural focus?*

Part 2: Gender
- What do you think 'gender' means in the Indian context?
- What policy initiatives do you think are needed for people to pay greater attention to gender?
    - *To what extent do you think existing policy works at national/state/district level?*
    - *How do you see transgender policy connecting to other wider areas?*
        - *E.g. Linking with Jal Shakti / Urban and Housing Affairs…*

Part 3: Policy
- There are three legally registered genders in India, do you think they all get considered?
    - *Do you think there is a focus on one particular gender, if so, why?*
    - *How do you think the three legally recognised genders differ in inclusion criteria?*
    - *3rd gender individuals got governmental recognition in 2014*
        - *Yet, the first 3rd gender toilet in Delhi wasn't built until 2021 by DMC*
        - *Thoughts on separation of transgender toilets from men/women?*
- *The national conclave in 2022:*
    - *Called for developing and adopting context specific strategies and approaches to meet the special WASH needs of transgender communities and other vulnerable communities*
    - *"Transgender people shall be allowed to use gender-based toilets as per their self-identified gender", do you see this working in reality?*

Part 4: Related Issues
- *Are there any other elements you want to discuss in relation to gender, water or sanitation?*

Focus Group Discussion Guide:

The focus groups shall be semi-structured and conversational. The below guide highlights the data required and potential prompts to use. The important thing is to ensure all general guidance is followed, and the overarching mission is complete; to document the challenges and successes of gender diverse sanitation. The environment should be open and supportive, the participants should feel relaxed and at ease to share any challenges and be validated in their sharing – we are not here to assess what are the 'most important challenges' we just want to identify a range of experiences to share the reality of access for a marginalised group.

	Potential Prompts:
Demographic and Introductory Information	
Information to be collected: - Gender Identities - Reasons to come to the Group Information NOT to be collected: - Education - Age	I. We would like to get to know you better, can you all share your name and gender so we know who we are talking to? II. Can anyone briefly share why you started coming to this group… does anyone have different reasons?
Sanitation	
We would like to know: - What is your experience of sanitation? - Does being Gender Diverse change your experience to other non-gender diverse persons? Information to be collected: - Sanitation at home, work, during travel… - Ideal toilet (layout, signs, location…)	III. What is your experience of sanitation? IV. Does being Gender Diverse change your experience to other non-gender diverse persons? V. How has your access to sanitation services changed over time? VI. What aspects of sanitation do you feel are made more difficult because of your gender? VII. Are you able to access sanitation any time (work, home, travelling…), and what does that look like (women's toilet, transgender toilet…)? VIII. If you could design anything for a toilet or toilet block/bathroom, what would it look like, and why? How would this look different to what you use now? (*potential for group drawing)*

Additional Challenges

Other potential related questions: - Relationship with Government - Thoughts on Official roles in Swachh Bharat (Cleanliness Ambassadors) - Other challenges as Gender Diverse persons	IX. X. XI.	Are there any other challenges beyond sanitation you feel are also overlooked, and can you briefly share this with us? Do you feel supported by the current government? Are your needs being met? Have you heard of the 'ambassadors of cleanliness', transgender people were being employed by government to teach SBM practice, where you aware of this, do you think it is a good program?
Wrapping Up		
Summarise the topic covered in the session	XII.	To ensure your voices have been heard correctly, we would like to recap. The main challenges were… the items you would like to see in your everyday sanitation were… is there anything you think we missed or misinterpreted? Is there any thing else you'd like to add?

9.6 APPENDIX E: RECRUITMENT MATERIAL

The following information was circulated to recruit participants for Chapter 3,5 and 6.

For Chapter 3, a call was circulated across internal University of Leeds Networks and the Gender and Development Network, additionally two social media calls were made via X [formerly Twitter] and LinkedIn that received 33 and 15 re-posts respectively.

For Chapter 5, a formal letter of participation was sent via email/LinkedIn to possible participants. In addition, a call was also made on X [formerly Twitter] which got 20 re-posts.

For Chapter 6, a formal letter of participation was sent via email/LinkedIn to possible participants.

9.6.1 Appendix E.1: Chapter 3 Email, X [twitter] & LinkedIn Calls

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Email Information:

Have you got experience of working with Gender, Water and Sanitation? Do you have 10 spare minutes? If so, please complete this survey, which is the 1st part of Data Collection for my PhD: "What Does Successful Sanitation Look Like: Interrogating Gender Guidance and Implementation".

https://leeds.onlinesurveys.ac.uk/understanding-gender-equity-in-sanitation-programs

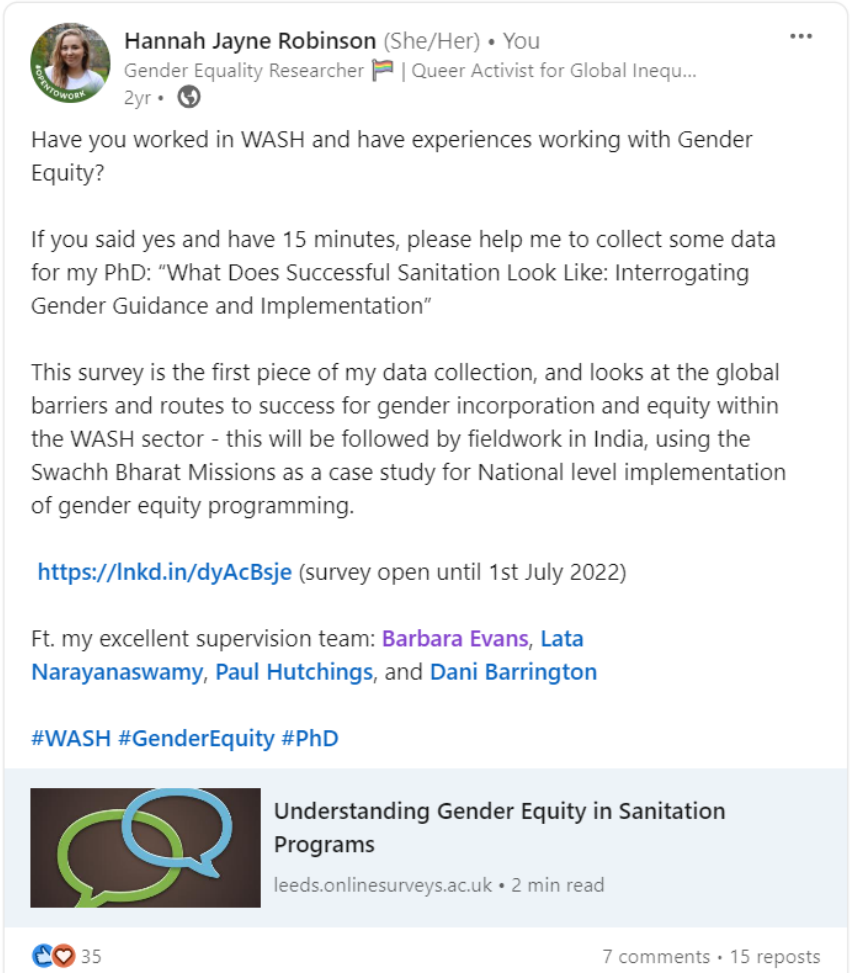
I hope to document and understand what 'gender' really means in our work, what are the current challenges, and how to we increase successful outcomes.

This will be followed by fieldwork in India, using the Missions as case studies for National level implementation of gender equity programming (if you are interested in this, please email me at cn16hjr@leeds.ac.uk)

This work is being completed with Dr Lata Narayanaswamy, Prof Barbara Evans, and Dr Paul Hutchings (University of Leeds) and Dr Dani Barrington (University of Western Australia).

Twitter Call:

LinkedIn Post:



9.6.2 Appendix E.2: Chapter 5 Formal Recruitment Letter & Twitter Call

School of Civil Engineering

University of Leeds
Leeds LS2 9JT

E c.prato@leeds.ac.uk
www.leeds.ac.uk

UNIVERSITY OF LEEDS

23rd May 2022

To Whom this letter reaches,

You have been contacted as you have been identified as a key individual in Hannah Jayne Robinson's work. She is currently conducting her PhD with the University of Leeds, in the School of Civil Engineering, and is in her 3rd year of the program, currently collecting data for her fieldwork.

Her topic revolves around water, sanitation, and gender, and she seeks to understand gendered guidelines and policies and their associated implementation. Her recent work has focused on India, due to the unprecedented national commitment to water and sanitation.

This work involves the anonymous interviewing of key stakeholders in this area: WASH practitioners, government personnel, and activists. The interviews seek to address the successful pathways and challenges involved with implementing gendered policies and guidelines in water and sanitation projects.

This work is being supported by **REDACTED** they will also be responsible for supporting her stay whilst in the country.

If you are available, and free to talk openly about your work, I would request you accept the anonymous interview offer to enable Miss Robinson's work.

Yours faithfully,

Signature Redacted

Professor Carlo Prato

Head of School

School of Civil Engineering

University of Leeds, UK

Twitter Call:

Follow-up Twitter Call:

9.6.3 Appendix E.3: Chapter 6 Formal Recruitment Letter

School of Civil Engineering

University of Leeds
Leeds LS2 9JT

E c.prato@leeds.ac.uk
www.leeds.ac.uk

UNIVERSITY OF LEEDS

19th January 2023

To Whom this letter reaches,

You have been contacted as you have been identified as a key informant in Hannah Jayne Robinson's work. She is currently conducting her PhD with the University of Leeds, in the School of Civil Engineering, and is in her 4th and final year of the program, currently collecting data for her fieldwork.

Her topic revolves around water, sanitation, and gender, and she seeks to understand gendered guidelines and policies and their associated implementation. Her recent work has focused on India, due to the unprecedented national commitment to water and sanitation, in particular how transgender, 3rd gender, and LGBTQ+ persons access and use WASH facilities.

This work involves the anonymous interviewing and holding of focus group discussions with key stakeholders in this area: predominantly community members, but also WASH practitioners, government personnel, and activists. The discussions seek to understand how transgender, 3rd gender and gender non-conforming persons use, access and design WASH facilities, both at home and in public, to understand how government guidance supports the community's needs.

This work is being supported by **REDACTED** as they will be responsible for supporting her stay whilst in the country, but they are not directly associated with this research, the design, or outcomes. The partnership is being developed by the organisation and our University, so research and investigation done by Miss Robinson at this time is not to be attributed to **REDACTED**, and any potential critiques should not reflect back to **REDACTED**.

If you are available, and free to talk openly about your work, I would request you accept the offer to enable Miss Robinson's work.

Yours faithfully,

Signature Redacted

Professor Carlo Prato

Head of School

School of Civil Engineering

University of Leeds, UK

9.7 APPENDIX F: COREQ GUIDELINES

As noted in section 5.3.1 and 6.3.1, all interviews and focus groups were conducted and reported to the Consolidated criteria for reporting qualitative research (COREQ) guidelines *(Tong et al., 2007)*. The guide covers 32-criteria to ensure explicit and comprehensive reporting of data.

9.7.1 Appendix F.2: Chapter 5

Domain 1: Research team and reflexivity

Personal Characteristics		
Interviewer / facilitator	Which author/s conducted the interview or focus group?	Hannah Jayne Robinson
Credentials	What were the researcher's credentials? E.g. PhD, MD	BEng
Occupation	What was their occupation at the time of the study?	Doctoral Student
Gender	Was the researcher male or female?	Woman
Experience and training	What experience or training did the researcher have?	No prior experience, took workshops and advice from full supervisory team.

Relationship with participants		
Relationship established	Was a relationship established prior to study commencement?	Two interviewees (N-DE-W-1 and PFGD-TN-W-1) were known to the wider research team, but not to the lead researcher conducting the KIIs/FGDs. [5.3.3, Table 9]
Participant knowledge of the interviewer	What characteristics were reported about the interviewer / facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	The interviewer began each discussion with her background, credentials, and summary of her existing knowledge on the topic. [9.2.2, Participant Information Sheet Appendix, B.2]
Interviewer characteristics	What did the participants know about the researcher? e.g. *personal goals, reasons for doing the research*	The interviewer introduced herself, motivations and positionality at the beginning of each interview in addition to the background information that had been given previously.

		[9.2.2, Participant Information Sheet, Appendix B.2]

Domain 2: study design

Theoretical framework		
Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*	Discourse Analysis; categorising challenges in transcripts by the System of innovation (SI) policy framework. [5.3.5, Table 11]

Participant selection		
Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive, then Snowball. [5.3.2]
Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Email or LinkedIn. [5.3.2]
Sample size	How many participants were in the study?	78. (22 KIIs, 2 PFGDs (5), 3 CFGDs (51)). [5.3.3, Table 9]
Non-participation	How many people refused to participate or dropped out? Reasons?	19. (All reasons given in 'sampling and recruitment' section.) [5.3.2]

Setting		
Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Combination of Office, Café, and Online. [5.3.3, Table 9]
Presence of non-participants	Was anyone else present besides the participants and researchers?	No.
Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	Job Sector, State (location), Gender. [5.3.3, Table 9]

Data collection		
Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Questions were not formally pilot tested, but were developed with Prof. Barbara Evans.

		[9.4.2, Appendix D.2, KII Guide]
Repeat interviews	Were repeat interviews carried out? If yes, how many?	No.
Audio/visual recording	Did the research use audio or visual recording to collect the data?	Audio, if agreed to by participants. [5.3.3, Table 9]
Field notes	Were field notes made during and/or after the interview or focus group?	Notes were made during the discussions if unrecorded, if recorded, they were made after to remain more engaged with participants. [5.3.3]
Duration	What was the duration of the interviews or focus group?	The suggested length was 60 minutes, however if participants wanted to continue the conversation, or stop prematurely, they were allowed to do so, resulting in conversations between 30m-2h. [5.3.3]
Data saturation	Was data saturation discussed?	Not applicable as a deductive thematic analysis.
Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No - for safety of KIIs, especially government employees who critiqued colleagues. [5.3.1]

Domain 3: analysis and findings

Data analysis		
Number of data coders	How many data coders coded the data?	1 - Hannah Jayne Robinson
Description of the coding tree	Did authors provide a description of the coding tree?	All codes were displayed in the results summary table, showing high-level deductive codes and detailed inductive codes. [5.4.2, Table 12]
Derivation of themes	Were themes identified in advance or derived from the data?	Highest order codes corresponded to the SI Policy Framework (Infrastructure, Institution, Interaction and Capabilities), sub-themes were coded inductively as found in transcripts. [5.3.5, Table 11]

Software	What software, if applicable, was used to manage the data?	NVivo. [5.3.5]
Participant checking	Did participants provide feedback on the findings?	No.

Reporting		
Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	Each quote was categorised according to the theme identified by the coder, and has a specific identifier as explained in the chapter's data collection information. [5.3.3]
Data and findings consistent	Was there consistency between the data presented and the findings?	Yes, major and minor themes identified were supported with illustrative quotes from KIIs/FGDs. [table 12 + Figure 4, 5.4.2]
Clarity of major themes	Were major themes clearly presented in the findings?	Major themes were displayed in a visual representation of categorised thematic elements. [Figure 4, 5.4.2]
Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Minor themes were displayed in a visual representation of categorised thematic elements. [Figure 4, 5.4.2]

9.7.2 Appendix F.3: Chapter 6

Domain 1: Research team and reflexivity

Personal Characteristics			
Interviewer / facilitator	Which author/s conducted the interview or focus group?	Lead: Hannah Jayne Robinson	Moderator: Ravikirankumar Bokam
Credentials	What were the researcher's credentials? E.g. PhD, MD	BEng	BA
Occupation	What was their occupation at the time of the study?	Doctoral Student	NGO Project Manager
Gender	Was the researcher male or female?	Woman	Man
Experience and training	What experience or training did the researcher have?	22 KIIs and 5 FGDs (Chapter 5)	12 Years working for Advocacy and research NGO

Relationship with participants		
Relationship established	Was a relationship established prior to study commencement?	The Interviewer and Moderator were known to each other. The Moderator knew the Focus Group Participants. The interviewer knew 1 of 6 KIs after meeting on the previous data collection trip for Chapter 5.
Participant knowledge of the interviewer	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	The interviewer began each discussion with her background, credentials, and summary of her existing knowledge on the topic. [9.2.3, Participant Information Sheet Appendix, B.3]
Interviewer characteristics	What did the participants know about the researcher? e.g. *personal goals, reasons for doing the research*	The interviewer introduced herself, motivations, queerness and positionality at the beginning of each interview in addition to the background information that had been given previously. [9.2.3, Participant Information Sheet, Appendix B.3]

Domain 2: study design

Theoretical framework		
Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded*	A Grounded-theory informed Approach.

	theory, discourse analysis, ethnography, phenomenology, content analysis	[6.3.5]

Participant selection		
Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive (KIIs) and Convenience (FGDs) [6.3.2]
Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Email or LinkedIn. [5.3.2]
Sample size	How many participants were in the study?	20. (6 KIIs, 2 FGDs (14). [Table 13 + 14, 6.3.3]
Non-participation	How many people refused to participate or dropped out? Reasons?	17. (All reasons given in sampling and recruitment description.) [6.3.2]

Setting		
Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Combination of Cafés, Community Centres and Online. [Table 13 + 14, 6.3.3]
Presence of non-participants	Was anyone else present besides the participants and researchers?	No.
Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	KIIs: Job Sector, State (location), Gender | FGDs: State (location), Gender [Table 13 + 14, 6.3.3]

Data collection		
Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Questions were not formally pilot tested, but were designed with the FGD Moderator. [9.4.3, Appendix D.3, KII + FGD Guides]
Repeat interviews	Were repeat interviews carried out? If yes, how many?	No.
Audio/visual recording	Did the research use audio or visual recording to collect the data?	Audio, if agreed to. [Table 13 + 14, 6.3.3]

Field notes	Were field notes made during and/or after the interview or focus group?	Notes were made during the discussions if unrecorded, if recorded, they were made after to remain more present. [6.3.3]
Duration	What was the duration of the interviews or focus group?	The suggested length for KIIs was 60 minutes, however if participants wanted to continue the conversation, or stop prematurely, they were allowed to do so, resulting in conversations between 20m-2h. FGDs were both exactly an hour. [6.3.3]
Data saturation	Was data saturation discussed?	Not applicable as research was documenting diverse personal experiences and was not aiming to be representative across the sample. [6.3.7]
Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No - for safety of KIIs, especially government employees who critiqued colleagues. [6.3.1]

Domain 3: analysis and findings

Data analysis		
Number of data coders	How many data coders coded the data?	1 - Hannah Jayne Robinson
Description of the coding tree	Did authors provide a description of the coding tree?	Codes were displayed as section headers (e.g. 6.4.1 Language: Homogenisation, Over Simplification and Inaccuracy). [6.4]
Derivation of themes	Were themes identified in advance or derived from the data?	All codes were inductive, derived through a grounded-theory informed approach. [6.3.5]
Software	What software, if applicable, was used to manage the data?	NVivo. [6.3.5]
Participant checking	Did participants provide feedback on the findings?	No.

Reporting		
Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. participant number	Each quote was categorised according to the theme identified by the coder, and has a specific identifier as explained in the chapter's data collection information. [6.3.3]
Data and findings consistent	Was there consistency between the data presented and the findings?	[6.4]
Clarity of major themes	Were major themes clearly presented in the findings?	Minor and major themes are not identified in this work – the study did not attempt to rank or categorise individual's challenges. It identifies commonality, but does not imply which challenges are the most profound or abundant in the population. [6.3.7]
Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	n/a

9.9 APPENDIX G: PUBLISHED JOURNAL ARTICLE

The following document is the official format of the published Journal Article referred to in Chapter 3. The content does not differ across the Chapter and this Appendix, the only difference is in the formatting.

This file was downloaded on 20th March 2023, and is the finalised approved copy currently available on the Development Policy Review website.

The timeline for the Paper is as follows:

- Submitted 27th January 2023
- Accepted 1st August 2023 (pending revisions)
- Revised 28th July 2023
- First published 16th August 2023
- Published with formalised formatting March 2024

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